DUTCH BULBS & GARDENS

PAINTED BY MIMA NIXON

DESCRIBED BY UNA SILBERRAD AND SOPHIE LYALL

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DUTCH BULBS AND GARDENS

UNIFORM WITH THIS VOLUME

GARDENS OF ENGLAND

By E. T. COOK

WITH **20** FULL-PAGE ILLUSTRATIONS IN COLOUR BY

BEATRICE PARSONS

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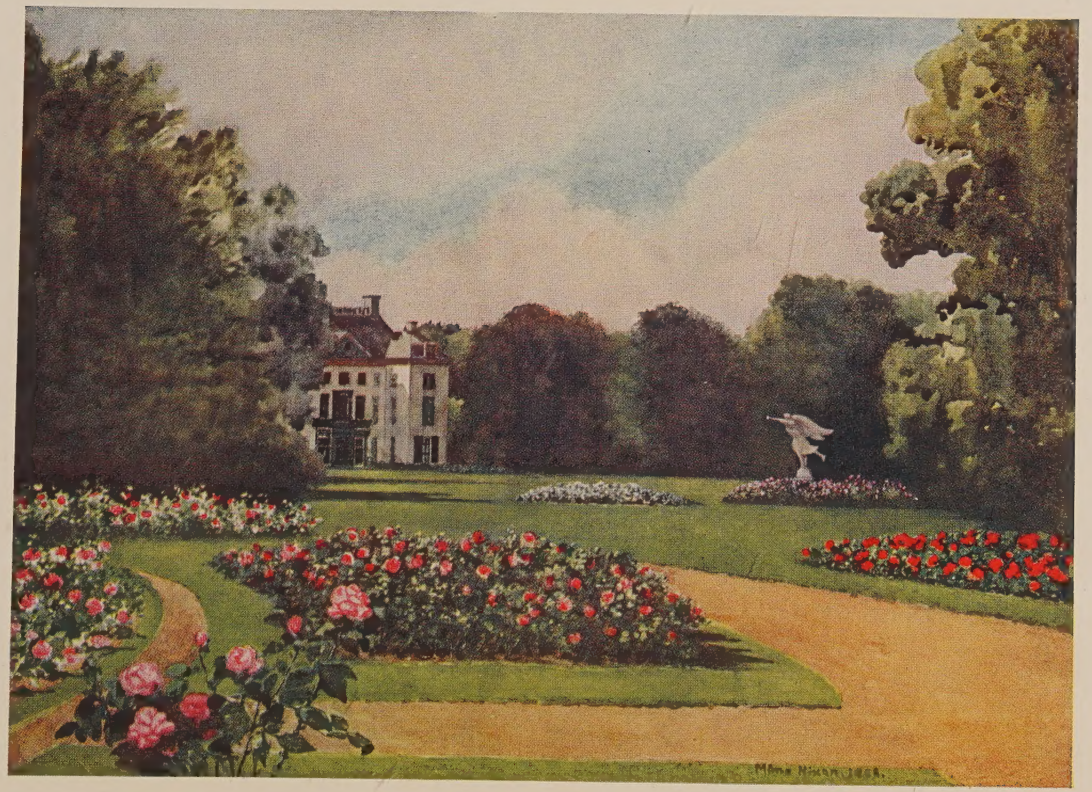

DUTCH BULBS AND GARDENS

PAINTED BY

MIMA NIXON

DESCRIBED BY

UNA SILBERRAD AND SOPHIE LYALL

LONDON
ADAM AND CHARLES BLACK
1909

TO

MY DEAREST FRIEND

GERTRUDE CROFTON

IN MEMORY OF HAPPY DAYS SPENT IN HOLLAND

WHICH WE SAW TOGETHER FOR

THE FIRST TIME

MIMA NIXON.

PREFACE

Miss Nixon wishes me to present her humble duty and thanks to Her Majesty, the Queen of the Netherlands, for graciously honouring her with the permission to make drawings of Her Majesty's Summer Palace and Gardens at Het Loo.

Miss Nixon also wishes me to thank His Excellency Baron Sistema van Grövestins for his kindness in procuring for her the privilege of access to the Royal Gardens at Het Loo, and to thank the Rt. Hon. Sir Horace Rumbold, Bart., P.C., G.C.B., G.C.M.G., for his kind help.

Her thanks are also due to Mr. W. H. Wind, Her Majesty's Head Gardener at Het Loo; to Miss van der Laan, Bennebroek; and to Messrs. Tubergen, Kersten, Krelager, Roozen, and the other growers at Haarlem.

I wish to thank Mr. Thomas Hoog of Haarlem, who helped me in the compiling of the following pages by supplying much valuable information, which I trust I have not too greatly mishandled.

UNA L. SILBERRAD.

March 1, 1909.

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DUTCH BULBS & GARDENS

CHAPTER I

ON GETTING THERE

UNDOUBTEDLY the way to go to the Bulb Gardens of Holland is to go the way by which the bulbs come to England. Or at least follow that route to a certain extent—the bulbs usually make part of the inland journey in their own country by canal boat, neither a very possible nor a very comfortable proceeding for the average traveller. But for the rest, their route is the one for those who have leisure and who want to get to the gardens in the most suitable way.

One boards a little Dutch steamer at the Tower Stairs, a steamer that seems in the greatest hurry to be off, but never is, though everyone and everything, including the steam escape, are very busy till it finally shrieks itself under the Tower Bridge and so down the river. These steamers are some-

times slightingly referred to as cargo boats, and certainly the bulbs, in their clean white packing cases, come to England that way; and when they are not coming, Dutch cheeses in quantity and other things take their place. But the passenger accommodation has much to recommend it. I remember a large deck cabin, much larger and lighter than a good deal of the first-class accommodation on the great Indian and Australian liners. I remember sheets of stout Low Country linen, reminiscent in their scent of woodruff of the Spanish mahogany dower chests where housewives lay up their gear with the aromatic herb. I remember a snug place with a swinging lamp and lockers, more suggestive of the cabin of the "Schooner *Hesperus*," when "the skipper had taken his little daughter to bear him company," than the saloon of a cross-Channel steamer. It is true the food is Dutch, but if, as not infrequently happens, one is sole passenger, one has it when and where one pleases, which is a compensation. It is true, too, there is no stewardess, and not often anyone who speaks much English on board, and that the journey takes rather long, but these are trifles.

By choosing the right tide, one drops down the river in the afternoon, in itself an interesting and

instructive thing; spends the night at sea, which if one has to go to sea seems the best time to spend there; and, if it is summer, sees the piers of Ymuenden when sea and sky look like the two halves of a pink pearl in the dawn. After Ymuenden one is in the Great Canal of Amsterdam, and it is a bad sailor who can then find reason to object to the motion or vibration. The latter appears principally to be connected with the steam whistle, which gives notice of approach to railway bridges, and the former to be rather conspicuous by its absence. Children driving goats to pasture and early astir pedestrians seem as if they could easily outdistance the very steady and matronly pace of the little steamer. But it is quite suitable, everything else on the water moves at the same pace, which agreeably allows of greeting and conversation with occasional sister craft, even allows of learning what they have for breakfast on board. And no doubt it is necessary,—the banks which shut the canal from the land, usually lying below the water-level, are very soft; even as it is, dredgers, those most fascinating craft of childhood, are eternally at work.

It appears to be the cautious custom of the country not to open the swing railway bridges

within twenty minutes of the scheduled time of a train's coming. As the trains do not invariably keep time, there are occasionally long waits for the steamers, which, being privately owned, wait the good pleasure of the State-owned railways. But it does not very much matter, there is the better chance to look around and see the country, which is so very flat here that there is a great deal of it to be seen; and so wide and peaceful that it puts to rest the sense of hurry. One who goes to the bulb gardens does well to put that sense to rest, for, seen hastily, run through in a few hours or a day at most, they produce little but an impression of sheets of gorgeous colour, which might possibly have been more beautiful had they been otherwise arranged. Time is wanted to see them, the leisureliness which regards them as gardens rather than as so many acres of scarlet, blue, or white, and the opportunity of knowing a few of the flowers individually. It is for this reason, among others, and as a suitable preparation to the leisurely observation, that a man does well to go to the gardens the way the bulbs come; and does well to possess his soul in patience, while the Dutch captain attends the pleasure of the man who minds the bridge, and while the steamer creeps up to Amsterdam.

The national virtue of Holland, the Holland one sees from the canal, is industry; not energy exactly, certainly not 'hustle' or any kindred thing, but industry, coupled with a neatness which keeps even the ditches tidy, and does not allow of that inalienable right of the English rural dweller, the garden rubbish-heap. The Dutch strike one as more industrious than anything else in the world, unless perhaps ants, to a community of which, it must be admitted, they bear some resemblance. The national ideal, at least in the bulb district, is cleanliness. About the highest praise to be bestowed on anything is that it is clean. A fine tulip bulb in its shining yellow-brown skin is extolled as "so clean"; the curious sandy soil in which the bulbs grow is spoken of with pride as always clean; the great compliment to be paid to a bulb barn is that it is clean. Possibly one of the advantages of the growers' work is that it is clean.

It is, I believe, customary to speak of Amsterdam as the Venice of the North. For one who has not seen Venice it is impossible to draw a comparison, but it seems difficult to imagine much resemblance between them—beyond the fact that both possess canals and houses and history. Amsterdam somehow reminds one of Dickens' novels, it is immensely

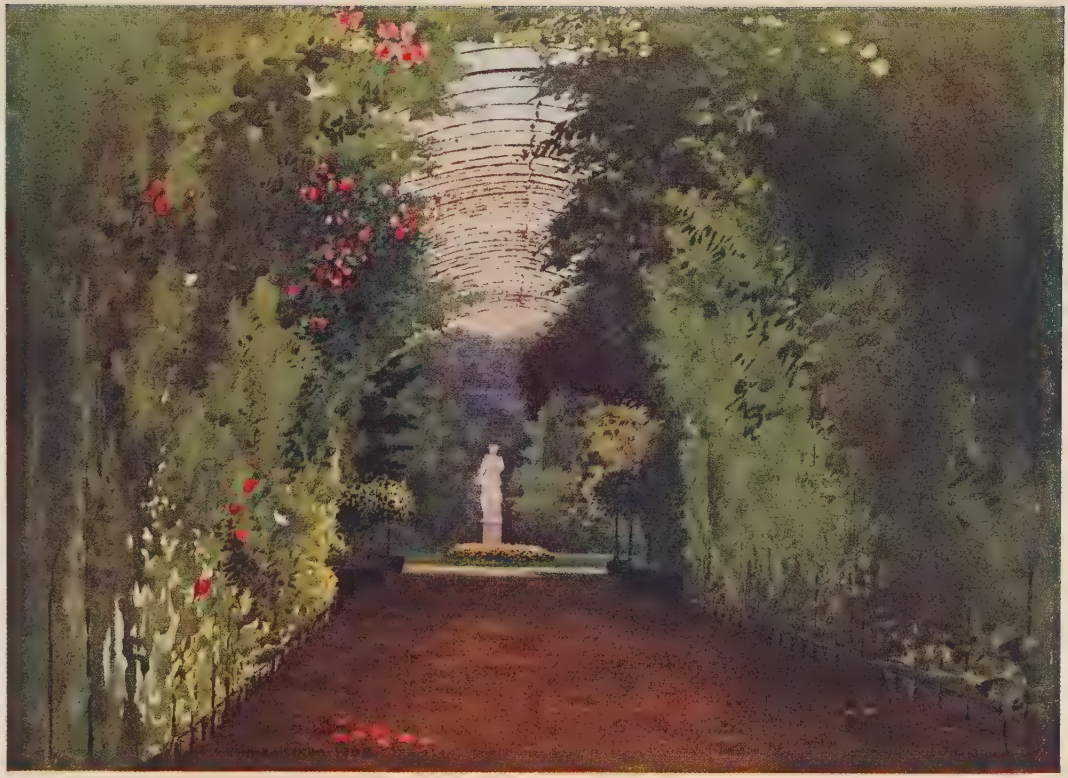
interesting, rather crowded, real, busy, homely, and genuine; not suggestive of devastating passions or high romance exactly, but very comfortable and wholesome. One would expect it to dine early, to attend to business, and have a substantial supper. This is not meant to imply that everyone in Amsterdam does these things, only that that is the general impression produced by the town. One can perfectly understand Amsterdam being the diamond mart of the world; but one cannot imagine an Amsterdamer ruining himself to buy a parure for some fair woman's caprice; or an Amsterdamess jeopardising her immortal soul to secure some special jewel. One no more expects it than one expects the Jews, who are the art dealers and bijou connoisseurs of the world, to be the producers of these same articles. Not that one thinks the less of them on that account. Artists and romancists and subjects of the grand passion, though no doubt adding to the joy of nations, make indifferent folk to live with; the sturdy man of business and the shrewd and kindly citizen might be a deal better for everyday use—and most lives consist principally of such usings. In Amsterdam one can perfectly understand the famous struggle with Spain and some of the

difficulties of the Boer War. But one cannot help feeling that, just as the French Revolution and the '45 are not in the nature of the people, neither are the ways and doings of Renaissance Italy.

From Amsterdam one goes by train to Haarlem, capital of the bulb country ; and if one holds any hearsay opinions as to the unexcitable nature of the Dutch people, one corrects them on the way. Phlegmatic in big matters they may be, but in small ones—No. It is only necessary to observe them seeing each other off at the railway station or starting one of their not too expeditious trains to realise that. The excitement of getting the people in, of arranging seats when in, closing windows and placing the inordinate quantity of packages everyone seems to carry, is astonishing to the Englishman. So too, rather, is the amount of help and service required by the exceedingly capable Holland women. A Holland lady never seems to think of opening a carriage door for herself; one imagines she would almost sooner go past the desired station than do so, though such a catastrophe could not well happen, for, in good time, she uplifts her voice and excitedly calls upon all and sundry to let her out, if no one has, unasked,

come to do it. She never attempts to board the train without at least one assistant; if she be stout, two. In the latter case it is not altogether unnecessary, for the steps are steep, the door narrow, and the stations, like others on the Continent, guiltless of platforms; the difficulties of getting a really fat and baggage-laden lady in are considerable. Inside the train she is very helpless about her belongings and prepared to cast herself upon the kindness of any or all men; outside Mevrouw is as capable as any woman in the world. The peculiarity probably arises from the fact that Holland, in some respects, is still rather mid-Victorian; the women, at all events, cling to the ideal of feminine helplessness in public places which was counted becoming in that era.

Haarlem, it is said, is behind the rest of Holland; with what truth I do not know, I know no other part half so well. It is a town not quite like any other, so quiet and bright, so small scale busy with its own concerns, so essentially cosy. There is there a feeling of attending to your own business, and the price of meat mattering more than the Messina earthquake (as, indeed, it is conceivable it may to a good many people); and also a feeling of comfort and the settled home life;



the hearth swept and the children coming down to tea. The whole town is intersected by canals, the which, always busy and doing away with a good deal of road traffic, may help to produce the quiet, bright, yet active feeling. The houses, many of them, are right on to the street, with windows low, so that one can hardly help seeing in and having a momentary and intimate glimpse of the lives of the inhabitants. This may help to give the comfortable homely feeling—it is hard to say, really impossible to say, what produces and wherein lies the spirit and atmosphere of a town.

At Haarlem station it is customary for those who have come in the bulb flowering time of April and May to hire a carriage and go the route prescribed by the driver; thus, without leaving their seats, seeing the gardens, and carrying away the impression of a patchwork quilt of flowers. An arrangement of foursquare bits of colour, separated from each other by as yet scantily-leafed hedges, and, here and there, intersected by pieces of ground resting from bulb culture, and either bare or green with vegetables, which, from sheer exhaustion, if not contrariness, the eye is inclined to prefer to the gorgeous flower patches. But that is not the way to see the bulb gardens. It is

better, for one who has leisure, to go first in early summer, when the great mass of flowers is over, and only the later and fewer bulbs are in bloom; when there is opportunity to know them as individuals, and appreciate the exquisite contrast of iris colours and green hedges, and to see to full advantage ranunculus, and the early blooming gladioli, and the hundred varieties of the lily tribe. To see them, as the unaccustomed eye cannot see them when it first meets flowers in sheets, field after field of colour. In June, then, come to Haarlem; there take a tram, and do not forget that the chances are some one in the vehicle will understand English very well indeed. And when the tram has come as near as may be to the destination, walk the rest of the way to the house of the grower. To see the bulb flowers without the grower is not to see them. On arrival at the house there is usually a meal first. It is always mid-day "coffee-drinking" in my memories, and there is never much talk of the flowers at it; questions, rather, about people in England and Holland, and perhaps about fashions and food, and the length of the winter, and the health of Mevrouw. After that there is a rest, during which Mevrouw offers cordials and home-made

liquors of a most excellent order, and den Heer finishes important letters. After that, walk forth to the flowers.

The gardens are sometimes rather far from the house, and often not very near each other, one man owning or renting several at considerable distances apart. Some of the younger men use bicycles to get from one to the other, some of the elder tricycles, which seems a doubtful expedient, seeing the nature of the roads. One old man who used the latter method, and wished to try the former, wept tears of sheer rage when his wife and family interfered, for the sake of his safety, to prevent him from learning to ride the swifter machine. And, being Dutch not French, he was not content with weeping, but proceeded to frustrate their well-meant interference. Of an evening, when by his own account he was late working in the office, he took his son's bicycle to a bulb barn, and, by the light of a lantern, rode it up and down the centre aisle. He damaged himself a good deal from time to time, and the bicycle somewhat; but he was not discovered. He explained his own injuries in various ingenious, if not strictly truthful, ways; and of the bicycle's he was never suspected, although he showed

himself generous in subscribing to the cost of repairing the mysteriously caused damage. He spent most of the evenings of one winter in this way. It took him all that time to at all master the machine. He was less apt than determined, and, had he not been bent on proving his independence, he might have given up. But he was bent, very seriously—one knows the concentration with which he ground up and down the barn aisle night after night, peering with short-sighted eyes for unseen obstacles among the lantern shadows, and colliding with the same corner at the same time each turn. In the spring he bought a second-hand bicycle. He was too good a man of business to risk the price of a new one on his own proficiency as a rider on the roads; moreover, he wanted a machine with solid tyres, he preferred the substantiality. On his purchase he rode proudly to his own door, and dismounted in time to save himself from falling off at his wife's feet. He is now occasionally to be seen on the roads, a proud and perspiring man. It is true, he does not ride his bicycle very much when his wife is not about to protest and object, but he is always (verbally at least) an enthusiast about it. It is his opinion that the roads of Holland are the most

excellent in the world for cycles. They are, he says, no matter what the weather, always so clean. That is true, clean they are; but good!—it is a matter of opinion. There is a foot-wide brick track in the centre, deep sand everywhere else; at least such are the roads to the bulb gardens I know best.

But in den Heer's case part of the bulb land was round the house. He had other farther away. Land so near Haarlem is too valuable for a man to own all he wants there. It would, of course, be to this near garden he would go when the important letters were finished and the visitor rested. It is no impressionist picture of colour splashes to be got there, but detailed, like an old Dutch painting. You do not see the stretches of blue and yellow iris, you see the flowers. They are individuals to den Heer, not masses. He knows them, or, at least, representatives among them. He stops before the long strip of new iris—mixed sorts raised from seed, in the hope of producing some variety worth saving and propagating.

"Ah, Ah!" he will purr as he touches some one among them, "here we have a good flower, the violet—the true violet—observe the eye."

You observe the flower, and the three plush spots on the lower petals, and do not perceive it to be very different, or, to tell the truth, very superior to anything you have seen before. But he perceives it and has already marked the plant.

"This we will multiply," he says, "in time you will see this in the catalogues. You shall give it a name."

You give one, the name of the boat that brought you to Holland perhaps, or perhaps "Amethyst," in honour of the purple tone which den Heer perceives, although you do not. And then you turn to admire another flower, a perfect blue, which seems very beautiful. But the chances are your admiration is misplaced.

"It is nothing," den Heer says with a shrug, at the same time cutting the bloom for you with the smallest and sharpest of knives. "There are many as fine, many better, the *Darling*, the *Solfatare*, both more blue. Did this, now, show any rosy markings, that would be something indeed in *Iris hispanica*."

It no doubt would, though possibly not an improvement in the eyes of the uninitiated. If you are of this opinion, you do not say so, but follow den Heer among the flowers, noticing how one here

and there is marked out for the honour of multiplication. A somewhat remote honour, which will not bring them into catalogue fame yet; may not bring them at all. For this reason the naming of the purple iris is hardly important, little more than a graceful compliment to the namer. The chances are rather in favour of the flower not being found worthy of founding a family to use the name; and even if it were, like the thousands of babies daily named, there is small likelihood of its achieving great fame.

Beyond the irises, divided by a high hornbeam screen, there are white gladioli; from the distance little but an irregular white blur in a small field they do not fill; but near spotless flowers, bending like a bevy of shy girls at their first communion, or novices waiting their bridal with the Church. Den Heer will stop to tell you which is the "true Bride," the perfect snow-white flower with no suspicion of purple on the stamen tips or faintly tinging the depth of the throat. He will tell you how the beautiful *Bride*, no matter how carefully grown and selected, has a tendency in these faint colour stains to show its remote ancestor, the ugly little magenta flower of the Canary Islands. He will also pick out for you the full flower head,

twenty florets on a stalk, five open at once, a perfection by no means always obtained.

By the white gladioli is a great patch of the taller and later blooming sort, not yet fully out, but already showing hints of their gorgeous colours, salmon and scarlet, pale yellow and delicate mauve. All the many tints to be found among them since the discovery of varieties at the Cape (where, by the way, the corms are eaten by the Hottentots) has allowed of endless crossings and hybridisings, and has removed them in beauty far from the few indigenous European sorts. Those of which Parkinson wrote with the satisfaction of one catching a famous rival tripping: "Gerard mistaketh the French kind for the Italian."

In the ground which surrounds the grower's house are to be found the choice varieties. This ground is not often divided into big fields devoted to some one or two kinds of bulbs only. It is more usually given up to smaller patches of special flowers, or new flowers, things which need care, or watching, or else are experiments. It is here there is likely to have been first seen green ixias (*Ixia viridiflora*) in bloom, and the strange sound of their dry rustling heard,—the sound which, taken in conjunction with their colour, the blue-green of

PALACE GARDENS, HET LOO

mildew, is somehow suggestive of Jeremiah's valley of dry bones. Here, too, will be Californian tulips (*Calochortus*), and the rare great iris of Persia (*Iris Susiana*), and other things in their season; always much more than can be seen before Mevrouw, standing at the house door, claps her hands to tell that dinner is ready.

To go to the more distant gardens, it is well to choose the morning, if it is spring, the time of the bulbs which have made Holland famous. A windy time, this, in Holland, one well understands then the advantage of pollarding the trees. Also one understands the necessity of the high hedges or screens which separate the garden into squarish patches. They are sometimes of beech, more often hornbeam, they quite enclose the piece of land, only at each corner there is a square-cut gateless gap, which makes a large area, seen from a distance, suggestive of a gigantic maze. In hyacinth time they are, of course, quite bare of leaves, unless one counts a few yellow ones of last year clinging here and there, a beautiful sombre background to the astonishing vivid delicacy of the flowers. It is a wonderful sight, more especially when one stands among them—rows of wax pink hyacinths, each perfect and each set in its circle of bright green

leaves; behind, the purple brown of the bare hedge; beyond, a glimpse of blue flowers, or pale yellow, or still more dazzling white. A sight wonderful when one stands among them, but also to be appreciated afterwards from a distance—preferably from the windows of the gardener's little house. If the wind is very cold and den Heer is going to be very long in conference with the gardener, it is possible that, after a certain time, one can admire them more from within over such coffee as the gardener's wife makes. A cup of such coffee, a footstool filled with hot charcoal, and a chair in the most shining kitchen possible to conceive of, are not to be despised, while den Heer, outside, talks about the cutting down of the hyacinth flowers.

To us who grow hyacinths in pots or in beds, where the failure of one is like a missing front tooth, the cutting down of the flowers seems almost a ruthless thing. We admit that it must be necessary, or it would not be done, but we feel that the men who do it ought to have some compunction about it. Though why they should be expected to feel it more than the mowers who cut the equally beautiful flowers in the English hayfields does not appear. The bulbs in Holland are grown for their roots as much as are carrots and

potatoes, as much as the grass is grown for hay. It is the poet, not the mower, who sighs over the flowers of the grass that perish; and the poet, if he happens to own hay-fields, does not hesitate to give orders for the cutting at the proper time. And the mower, if he has an eye for beauty, admires the flowers, even though he says nothing about it, and cuts them down to order. A boat-load of cut hyacinth flowers, with their beauty, and their scent, and their cutting off at highest perfection may touch the imagination more than a four-ounce bottle of heavy red-brown oil, which represents the life and fragrance of half a square mile of jasmine flowers. But it should not, if the jasmine was only grown that the oil might be made, the hyacinths equally are only grown that their roots may be fine and saleable; and when their well-being demands the cutting of the flowers there is no sacrifice in their going, for to this end they grew and matured and came to flower.

There is yet one other way of going to see a bulb garden, for those who are fortunate enough to know a grower who owns one at a so situated spot. Den Heer owned one, and on a June afternoon we went to it, his son, den Heer Karel, and I. We started from a small quay in Haarlem,

travelling by boat—a boat not so much bigger than a barge, which carried a miscellaneous cargo, and a captain and crew — two souls inclusive. Captain was clean, crew rather dirty, for a Dutchman, but both very polite. They raised their hats on the slightest provocation,—it would really have saved trouble if they had kept them off altogether while I was about, and shook hands most formally with all quayside friends before casting off. There was one other passenger, an old peasant woman, with a beautiful head-dress with spiral gold wires standing out over her ears. She hugged a small goat all the voyage, as if she were afraid of its jumping overboard, or eating the green stuff which was part of her luggage, though, since she sat on that and she was a voluminous person, it is difficult to see how it could have managed to do so. There was not much to sit on besides one's luggage if one had any, or that part of the cargo which was smooth enough and firm enough to provide a seat. It is possible den Heer Karel did not quite like the expedition. He had a feeling that it "was singular," and if there is one thing a Dutchman does not like, it is to look singular. Maybe it is this clinging to the conventionalities, which we have rather lost, which

gives one the feeling of having gone back some decades when one is among them.

But den Heer Karel was goodness itself, and, without a word of protest, made the expedition. We steamed down the canal—a narrow canal lying in the old part of the town, where old purple-red houses, with green shutters, and tales haunting their every doorway and steep gable-end, came down to the water's edge; where broad brown craft lay crowded along the water side, and red-capped men lowered barrels from upper stories, and wooden-shod women, with their skirts girt high, clattered down the step, which alone stood between their back doors and the waterway, to fill empty pails, or empty full ones. A life and a folk strangely suggestive, at least to the foreigner, of those of Haarlem city in the days of the Spanish occupation.

The boat did not go fast that June day; indeed, once afloat in her, it was possible to realise at what a really superior speed Amsterdam had been approached on the great canal. It was also now possible to think of that canal as "great." It was very great in comparison to this one. But even at this rate of progress Haarlem was left behind before very long, and on either side was green

country. A very straight white road ran by the canal on one side. It was by this on his bicycle den Heer Karel would have gone to the bulb garden had he been alone. A remark on the subject drew from him the assurance that it was much cooler to go this way, and that the glaring white dust of the road often hurt his eyes. The which, with its dwelling on the one point of the journey agreeable to him, seems more really graceful than an assurance of delight in it; this even if he had not added, "besides, then I should not have had company, and now I have, which is pleasant." There is a certain sincere politeness among the Dutch, which is attractive in its simplicity, and at its best recalls the Quakers.

I have been told that the village to which I went that day is surprisingly wicked. The same has been told of every village, except one, with which I have come in contact in England. Possibly, usually, with some truth, though the surprise may have lain more in the nature of the surprisee—it is hard not to think of picturesque cottages and green fields as Gardens of Eden—than in the outrageous iniquity of the villagers. Certainly den Heer Karel was no connoisseur of wickedness in any of its branches; he would be

likely to find surprising most varieties that came to his notice among the village people whom he individually knew. His uncle, who was the pastor of the village, was of something the same sort, though, so the nephew said, he did not know half the bad things which were done there. The which was easy to believe when one met the pastor, a white-haired old man, whose hopeful eyes saw always the best in human nature, and whose unconscious saintship inevitably drew out the best, so that the most unrighteous, from shame or from sympathy, made efforts to be righteous in his company.

In the gardens, which were reached at the end of this leisurely voyage, ranunculi were in bloom —a flower not often to be met in quantity in England, where it is not popular. Why, is not clear, certainly one might have thought it old-fashioned enough to have returned to favour with straight-backed chairs and china dogs and cottage ornaments. The more admired anemones were nearly over that day, only a few crimson and purple flowers remained, so wide open that their black centres were all revealed. They still stood stiff and straight on their stalks, not bending to every breeze, like the ranunculi, which were a

mass of dancing rosettes, scarlet for the most part, though at the far corner of the field there was a narrow strip of ivory-white ones, a beautiful colour contrast.

We were still looking at the flowers when the pastor found us, and carried us home to the Pastorie to tea. Tea in handleless cups, brought from China, long before the ports were open to any but the sturdy old Dutch traders, and handed down from mother to daughter without written bequest, but inalienable as an English coronet. The maid-servant, I remember, brought in her cup, not a little handleless one, but a good substantial young basin, and her mistress filled it from the pot when we had all been served. She was a rosy-cheeked bare-armed maid, close relation, one might think, to Miss Matty's invaluable Martha, or, in appearance, to Peggotty of greater fame. Like Martha in her taste for the lads, so her mistress said—a perhaps excusable fault, seeing that many of the water-going profession—a class notoriously adept at love-making—were always coming and going to the otherwise quiet little village. Like Martha, too, she was in her unabashed interest in strangers. It was the most wide-eyed attention she bestowed on me, and with the most obvious reluctance that

AZALEAS, HET LOO

Mima Nixon. '03

she left the room, with me in it, when she had got her tea.

It was rather a dark little room, though it had two windows; one, decorously veiled by hand-netted curtains, looking on to the cheeriness of the village street; and one on to the small garden, where samples of all the choice bulbs from the great grower in Haarlem were set, and usually failed to bloom, for the pastor, unlike his brother, was a poor gardener. On the other side of the passage was another room, the pastor's study it may have been called. There were no deep-seated leather chairs there—the chairs were mostly wood, and not inviting to repose; nor any richly sombre rows of leather-bound books, there were only three books, a Bible and two others, and they were shabbily bound. Rather a bare room, the white scrubbed floor quite carpetless, except for a very small island of mat, which modestly hid itself under the table. The folk who came to see the pastor on questions of mutual dispute or individual difficulty, or any other of the hundred troubles of common humanity, would seem to have been many. They were the sort that wear wooden shoes, hard on carpets and great carriers of dirt, the wife said,

and she, no doubt, thought they would be happier if they had not to keep such things in mind—as her husband certainly was. He was most at home, good man, dispensing the wisdom of comfort in his carpetless room, with his Bible and tobacco lying together on the deal table, and the smoke of his pipe and his guests' curling to the sunny yellow-washed walls. The big window of this room looked out on to the quay, and from it the pastor could nod greeting to half his parishioners of a morning, and see, if he knew how to look, a good deal of their doings. Even while we stood there that day, one of us very conscious of the quiet brightness, the simple saintliness of the place, the captain of our lately left boat came up on the deck of his little vessel. He came to greet a girl—the fourth he had kissed, with the well-received amorousness of at least betrothed rights, in my short acquaintance with him. But the pastor did not know that, it was not the sort of thing he knew. He knew how the captain had carried Johan Vorst's bulbs to Haarlem free that year, when the poor fellow lost so much in the floods; how he brought the widow's firing every winter, and how he gave a job to Crooked

Jan when he came back from prison, and no one else (but the pastor) would give him a helping hand. These were the things the pastor always knew—Blessings on the folk who always know the best of us, and expect it, too!

But this is not concerning Dutch bulb fields, it has floated rather far from the subject, like the little canal boat. Yet in a way it concerns them, for to appreciate the flowers, and not only to see them as so many streaks of colour or so many acres of blossoming roots, it is perhaps well to know something of the life and ways of the people who grow them—a people who have been the greatest gardeners, and some of the greatest sea-carriers and collectors of the world for 400 years; who, with much that is new, have kept a good deal that is old, and who are perhaps less like what we are than what we used to be.

CHAPTER II

CROCUS AND EARLY SPRING FLOWERS

WINTER in the bulb country is not a very attractive time, at least to the foreigner. The same possibly may be said of winter in England, though few healthy Englishmen, unless tied very tightly to town, admit it. Winter in Holland is long, and, more often than not, very cold. The canals are often frozen for a considerable time, when the easiest way to get about in the country districts is on skates. Nearly all Dutchmen are at home on skates; comparatively few are clever oarsmen, though one might have thought they had equal opportunities. The reason probably is, that one can go upon one's work or business on skates, and save rather than lose time thereby; whereas, in the average man's circumstances, one can only row for recreation. In England, of course,

THE RETURN OF THE STORKS

such a reason would not operate; and, given the Dutch facilities, one can imagine that as many good sportsmen would assemble to watch inter-county contests on the frozen or liquid water (according to season) as now enthusiastically look on at cricket or football matches. Certainly there are very marked differences between the nations.

They show among the women not less than the men. The pride, at least of the more old-fashioned Dutch housewife, is her stove, the closed stoves, which heat the room very well and very cleanly, give little assistance to ventilation, and offer none of the cheer and sympathy of the open fire. I have only met or heard of one English housewife who was proud of a shining stove, and she lived in the Potteries, and was the wife of a cheerful drunkard. In summer the majority of the stoves in Dutch houses are taken down and put away — one would like to know where. They must require room to store, and present an interesting sight, wrapped in winding-sheets of greased paper, keeping their summer Sabbath, like the dead kings waiting the summons of Charlemagne's sword. But the finest and most handsome of stoves are not taken down, they remain in

place through the summer, covered when the weather is damp and when the room they adorn is not to be occupied; on no account to be used for fire — standing as a testimony to the owner's housewifery and an impressive object to the visitor. One visitor, at least, was impressed by such a shining steel tower, impressed with the amount of elbow-grease required to keep it in order, if nothing else; though that same visitor had the bad taste to admire far more an old stove, exhibited with similar pride, by the host of a little inn on a remote Swiss road—a wonderful stone stove, with the date 1700 cut into it, and a history as interesting as would be the experiment (for the uninitiated) of lighting a fire there. A stove, that, to burn compromising papers, to destroy blood-stained garments and traces of crime, while the storm thundered without, as it did that day. The Dutch stoves, no doubt infinitely better fitted for combustion and real destruction of such things, or any other, make no such suggestions. They suggest, besides the pride of housewives and the pains of maid-servants, merely the useful heating apparatus of a comfortable home, where, when the short days draw in and the lamp is

lighted, the family sit about the table and read and work—do crochet work and study the foreign classics. Or perhaps examine pollen and plant parasites with a microscope; or play very sweetly on the piano, which not infrequently is adorned with a blue or crimson worked cover.

There is not much to be done in the bulb gardens in the winter, at all events during the frosts. The land is put to bed, most of the bulb fields are covered with straw or reeds, only those containing the hardiest sorts, such as *Scilla sibirica*, *Winter aconite*, and a few others, are left bare. This covering, which is of varying thickness to suit the bulbs below, is not moved till the frost breaks and the milder weather sets in. But when this happens there is a good deal to do, for it has to be shifted in accordance with the rise and fall of the thermometer: partially removed if the weather keeps mild, else the bulbs would develop too fast in the warmth underneath; replaced for cold nights, or if sharp frost is likely. In early spring great attention has to be given to this, for with sunny mid-days, sharp night frosts, periods of prolonged soaking rain and sudden nipping winds, there is much trouble in suitably protecting and not over-covering the bulbs.

In England the flowering of the crocus is looked upon with a certain amount of joy. It is not, like the first snowdrop, the solitary blooming of some brave single flower, which gives hope that the winter may be going, but the sudden bursting into bloom of hundreds, which declare that the sun has power again. A ribbon of yellow on the grass, battalions of compact mauve figures on the slope, whole armies, violet and white and gold, delicately fragrant, alive with humming bees, definitely proclaiming the doom of winter. If this is so in England, in Holland the flowering of the crocus means more still; every flower represents a separate young crocus, a sound saleable corm, if the grower knows his business and the ground is good. The bulbs, blooming in hundreds, stand for a harvest underground, the census of which might be taken from above, had one time and patience to count the flowers, for at the base of each flower-shoot that the parent bulb throws up a little young bulb will be found when the roots are lifted at the end of June. So a field of flowering crocuses is more than a thing of delicate beauty, and more than a sign that winter is over and past, and the time of the return of the storks is at hand, it stands for so many fawn-coloured bulbs—a marketable com-

THE PROMISE OF SPRING

modity, and each in itself a mystery of re-creation and increase.

Crocuses are not much grown in the immediate vicinity of Haarlem, the land there is too valuable to be devoted to the inexpensive bulb. Many thousands come from Hille, some small growers there make a speciality of them, and grow little else; it is they who supply the big men who supply the markets. There would seem to be about eighty-three sorts of crocus now, which is something of an increase on the six sorts which "Robinio of Paris, that painful and curious searcher after simples," sent to Gerard. By Parkinson's time there appear to have been thirty-one sorts known; but they had begun to cultivate bulbs in earnest in his day, and to them it would have been more a matter of interest than surprise to see our varieties, all of which, on the authority of the grower, it is said, "have been derived from (grown from seed of) the original *Crocus vernus* of South and Central Europe." When this crocus was first introduced into Holland it is not easy to say. Nor is it easy to discover "when" (in the words of the same grower) "cultivators and amateurs began to hybridise the different forms"—nor yet when there first were different forms of it to hybridise; certainly it

happened very long ago. There is a tradition that the saffron crocus (*Crocus sativus*) was introduced into England in 1339. Hakluyt speaks of its being brought by a pilgrim who, appreciating the sovereign value of the plant, and "proposing to do good to his country," carried home a root hidden in his staff, which had been made hollow "of purpose," though whether for the purpose of carrying saffron or anything else of value or interest he could pick up, is not clear. In either case the proceeding is rather typically English, as also are Hakluyt's further remarks on saffron growing. He regrets that it has become a failing industry in these days, when many sturdy fellows are without work, and suggests, even as we suggest the revival of sundry curious things, that it should be revived for the benefit of the unemployed, who then, as now, were a cut-and-come-again problem.

It is interesting to notice that the older writers include all crocuses and colchicums under the name saffron, not meaning, as we do now, only the *Crocus sativus*. This crocus, and other varieties of autumn-flowering ones, are grown in Holland; the delicate flowers, beautifying some few fields when the rest are, for the most part, bare, give to them almost a look of spurious spring. It was no doubt

this spring-like look of the autumn flowers which inspired the legend that they first appeared in fields where Medea spilt some drops of the magic liquor she had prepared to restore Æson to the vigour of youth. No doubt also it was this, and the fact that, reversing the usual order, the seed heads come in the spring, that gave them their old name, "Sonne-before-the-father."

The original crocus of all crocuses is now believed to have been a native of Kashmere, and to have followed the Aryan migration through the temperate globe; brought, no doubt, in the first instance for its saffron, whereof it would seem these remote ancestors of the European race thought as highly as did Hakluyt's pilgrim. In its various wild forms it is found now in Persia and the Levant, in the Alps and the Apennines, in Italy and Greece, and on the lower slopes of the Pyrenees; and it has been so long in these countries that it has come to be reckoned an indigenous flower, and has a place in many old legends. Ovid tells us that Proserpine was picking "graceful crocus and white lilies" when she was carried off. It is he also who tells of the origin of the flower in Greece. A youth named Crocus in love with a nymph Smilax: he, for the impatience of his love, turned into the

flower; and she—for no apparent reason, which seems unfair—turned into, not the delicate green plant we call by her name, but a yew tree, a somewhat sombre fate for the inamorata of so ephemeral a trifler as Crocus appears.

In spite of this tale of impatient love there does not seem to be any record, as one might have expected, of the use of crocus in the flavouring of love philtres or charms. The veil of Hymen was saffron-coloured; the flower, among others, sprang up on the ground where Zeus and Hera reclined, from sheer astonishment, one might imagine, at seeing the Olympian pair on good terms. We ourselves have dedicated it to St. Valentine—

> "While the crocus hastens to the shrine
> Of Primrose love on St. Valentine"—

though the time of its flowering probably has to do with that. But among the many strange and unpleasant things which have been used in the flavouring of love philtres saffron does not appear to have had a place.

It has been used for many other things. "The crocus rayed with gold" is among the flowers which crown Sophocles' "mighty goddess." The Greeks also, we know, reckoned it among perfumes. Aristophanes, in *The Clouds*, has a somewhat

unquotable line on the subject. Among the Easterns it was held a choice spice: "Spikenard and saffron, calamus and cinnamon, with all trees of frankincense; myrrh and aloes," were the spices that were to flow out from the garden of the Beloved in The Song of Solomon. One old authority held it to be the food of the fairies, and the humans in his day held it in high esteem. But now it is fallen from its high estate, and, though the County Council or some other body might still prosecute a man for selling adulterated saffron, it would be disinterested philanthropy, and bear no resemblance to the burning of offenders at Nuremberg in the fifteenth century for a similar offence. In Persia it is still much used as a condiment; in a less degree in Spain; in Holland one finds it flavouring rice boiled with milk; here in England it lingers still in the saffron cakes of Cornwall, otherwise it plays small part, except as a food-colouring matter. For that it seems to have been in use in Shakespeare's time. The clown, who has so many things to buy for Perdita's shearing feast, ticks it off among the rest: "I must have saffron," he says, "to colour the warden pies." And we, though we have lost the receipt for warden pies, still use saffron to colour

our cookery. Especially is this the case in Russia, where the law holds that all food-colouring must be vegetable,—a singular law, when one comes to think that all the alkaloid poisons are of vegetable origin, and for real nastiness it is hard to beat some of the dyes of Nature's providing.

But it was as a drug that the saffron crocus was most greatly prized among the peoples of middle and western Europe. In the late middle ages it appears to have been much used as an eye-wash,—one feels it was fortunate folk did not have to try their eyes then as now. By Gerard's time it was in great favour for many things; he speaks of it as making "the senses more quicke and lively, shaking off heavie and drowsie sleep, and making a man merrie." "It is a herb of the Sun and under the Lion," writes N. Culpeper, student of physic and astrology in 1652. "Let not above 10 grains be given at one time, for if the Sun, which is the fountain of life, may dazzle the eyes and make them blinde, a Cordial being taken in an inordinate quantity may hurt the heart instead of helping it." This view possibly led to crocus standing in an early Victorian *Language of Flowers* for "excess," or—in the generous way that one small flower might then be interpreted to mean a whole phrase—

"beware of excess of love." But it is more than as a cordial for the heart that N. Culpeper regards saffron: "It quickens the brain," he says, "for the Sun is exalted in Aries, as well as he hath his house in the Dragon head, it helps the Consumption of the Lungs and difficulty of breathing, it is an excellent thing in epedemcal diseases, as Pestillence, Small Pox, and Measles; it is an excellent expulsive medicine and a notable remedy for the Yellow Jaundice." More than this can hardly be asked of one plant. After it the humble snowdrop is a mere nobody.

The snowdrop may, with justice, be called humble, certainly it has a much better right to the title than the violet. Gerard, by the way, speaks of it as a "bulbous violet," though there seems little resemblance between them, except the ascribed qualities of humility and retirement, which are entirely undeserved in one case. Violets like sunshine, a good position, and fat living, and, though the leaves hide the flowers in some varieties, it is of those that the scent is strongest and most betraying. It is not the fault of the plant if it is suffered to "blush unseen." But snowdrops really do like retirement and poor ground. In Holland they decline entirely to

grow in the open in fields or gardens, and they cannot thrive, really cannot live, in manure and all fat soil. All the snowdrop bulbs which are raised in Holland are grown under hedges or in orchards, where the roots of the trees impoverish the ground and take from it what the little bulbs dislike. Mostly they are grown by the smaller growers, who sell them to the big ones in their immediate neighbourhood. It is possibly this preference for overgrown places and neglected soil which has made snowdrops flourish and increase so in the orchards and overgrown gardens of old monasteries. It has been suggested that it is because they were planted there in such abundance in the old days when they were sacred to the Virgin, and were used to strew her altars on the Feast of the Purification,—when they, the Fair Maids of February, as they were called, were the only maids who had any right within those walls. But since they flourish equally well in old shrubberies and orchards unconnected with monasteries and monastic history, it looks rather as if soil and situation has a good deal to do with it too.

They have long been grown in Holland. The old Dutch name was Somer Sottekens, though what it means I have not been able to discover.

A CROCUS FIELD .

Mima Nixon. 1908.

Somer, no doubt, is another form of "Zomer" (summer), though snowdrops no more then than now bloomed nor yet were planted in summer; Sottekens remains, to me at least, a mystery. The first snowdrops came from Germany and Hungary, and the later blooming sort from Constantinople. In Parkinson's day there was no talk of them being native to England. They had not been in the country long enough to have increased and naturalised themselves, as they have in some districts now. Undisturbed, in both England and Holland they increase rapidly, by offsets, according to the usual bulb habit; if they like the situation, often forming clumps twenty or thirty strong, and continuing to grow in land that has long gone out of cultivation.

In England the flower is not so much admired as it used to be, when it—

> Chaste snowdrop, venturous harbinger of Spring,
> And pensive monitor of fleeting years—

received the tribute of much minor verse. Now we principally remember in connection with it that it does not lend itself well to pot culture, and makes no show as a cut flower; hence, seeing its inconspicuousness and the usual state of the weather at the time of blooming, it is of little use

as an ornament. And the fact that it either takes so kindly to its surroundings that it becomes almost a weed, or else dislikes them and practically declines to grow at all, is rather against it. But in the days of our grandmothers it was different, then it was essentially the young girl's flower, and so was graced with all the characteristics which were reckoned to adorn "refined and elegant young females." Of it, "the Winter's timid child," a poetess of those days wrote:—

All weak and wan, with head inclined,
Its parent breast the drifted snow,
It trembles, while the ruthless wind
Bends its slim form; the tempest lowers,
Its emerald eye drops crystal showers
On its cold bed below.

Where'er I find thee, gentle flower,
Thou still art sweet and dear to me!
For I have known the cheerless hour,
Have seen the sunbeams cold and pale,
Have felt the chilling wintry gale,
And wept and shrunk, like thee.

Conceive the delight of the first "elegant young female" who saw these words inscribed on the pink-tinted pages of her album, probably beneath some two or three dried flowers of the mishandled plant. Well, well, we have changed all that now; the elegant females have gone,

though the minor poet is still with us, and no less minor, though possibly less "refined."

Earlier than crocus, as early as snowdrops, comes the winter aconite — *Eranthis hyemalis.* It is grown in quantity in Holland, but as the corms are so very small, not more than half an inch in diameter, one does not see large stretches. It is said that as many as a thousand good corms can be raised on two square metres of land, so naturally it is sold cheap. We prize it as one of the earliest flowers of the year, and because it is hardy, and will, if left to itself, grow anywhere, even under deciduous shrubs. But to our forbears it had another and greater importance, for it was reckoned the "counter-poison monkhood," and its roots were considered "effectual, not only against the poison of the poisonful helmet flower and all others of that kind, but also against the poison of all venomous beasts,"—a large and useful characteristic to be possessed by any plant.

One of the most beautiful of the early spring flowers is one practically without history — the *Scilla sibirica.* It is comparatively a newcomer in Dutch bulb fields, for it was brought to Europe from Asia Minor, the Happy Land of

bulb collectors, somewhere about 1800. As yet there are only three varieties differing from the original and first discovered kind. These are pale blue, white, and pinkish pale blue, all reared from seed, and none, in the opinion of the uninitiated, to compare with the original blue, —a colour bluer than anything else that grows, except perhaps gentians, and though not so deep and intense, almost more brilliant and striking than they. Coming into flower almost before crocus, growing low and close to the ground, and of this rare and exquisite colour, a field of them in flower against the pearly paleness of the cold landscape is a sight not to be forgotten. In England, though they are admired, they are hardly yet grown so much as one would expect, seeing that they will endure hard treatment and a poor soil, and, if untouched, year after year send their blue flowers through the grass. Immense numbers are grown in Holland, though not round Haarlem, more in the direction of Hillegom, where the land is cheap. The little bulbs increase rapidly, from offsets which grow around the parent. They can also be easily raised from seed, and, contrary to the habit of most bulbs, come to the flowering stage

fairly quickly, seed-grown Scillas being of a saleable size in from three to four years after sowing.

It was certainly not this early blooming member of the Scilla family that Reginald Scott had in his mind when, in his *Discovery of Witchcraft* (1587), he wrote of the countries "where they hang Scilla (which is either a root or in this place garlic) in the roof of the house to keep away witches and spirits." One wonders a little what he meant, for garlic is not a Scilla, and it hardly seems likely he was referring to what Parkinson calls *Scilla alba*, or the Great Sea Onion of the Mediterranean. Onions proper, and many varieties of the Alliums, have, of course, played some considerable part in the history of witchcraft. The only two cases of witchcraft which came under the personal notice of the present writer were connected with the homely English onion. In the one case, it was an old man who accused his neighbour of "overlooking the onion bed," with dire results; and in the other, it was an accredited wizard who "named an onion for" his enemy, stuck it full of pins, and hung it to shrivel in the chimney, in order that the enemy might shrivel as the onion did, and within the year die in agony.

As it happened, however, it was the wizard who died. On his death-bed he sent for the other, confessed what he had done, and ordered that the shrivelled onion should be given him, possibly with the idea of undoing the spell, which had rebounded on himself. The enemy is alive to this day, and is as great a man as the other was little, and better known for good works than the other was for bad—wherefrom, obviously, there is a moral.

The Allium family has a long history and many uses, but as ornamental plants they are hardly to be recommended. Some of them are grown in Holland for that purpose, and we read of them in the catalogues—handsome pale blue, yellow, and white flowers, and a few rarer ones pink, very showy, and for the most part somewhat unsavoury if broken or even slightly bruised. They are the smart members of a homely family, and, as is usually the case with such, though no doubt very admirable in some ways, not appealing specially to the majority of people. But Alliums blooming, as they do, in May, are hardly early spring flowers, and having by some devious way reached them, the subject had better be quitted.

CHAPTER III

HYACINTH OR IRIS?

HYACINTHUS, beloved of Apollo, accidentally met death at the hands of that god, through the interposition of jealous Zephyr. Apollo, after grieving for his favourite, cried to his blood: "Thou shalt be a new flower inscribed with my lamentations!" and immediately after, "Behold the blood shed on the grass ceases to be blood, and a flower springs forth more beautiful than Tyrian dye, and takes the same form as the lily, save that the lily is silvery white and this is purple. Phoebus himself writes his own lamentations upon the petals, and Ai! Ai! is written upon the flower."

But it was very long ago when Ovid told this tale of the childhood of the world, and in the course of the centuries some names get lost and some misapplied; the question is, what flower

is it that sprang from the dead boy's blood? A flower that is purple — and the Greek purple, which included many shades of red—was a colour in no way related to the French greys and violet blue that are all our hyacinths can show, but which is the colour of the common purple iris. A flower that was like a lily, which our hyacinth is not, excepting only the lily of the valley — a solitary and most untypical lily in its way of blooming; but which an iris may be taken to be, seeing its long confusion and identification with the lilies of France. And a flower that memorialised the sun-god's grief, and was inscribed with signs of it: an inscription on the hyacinth is hard to seek, for though it is true some learned person has given the common wood hyacinth the surname *Non-scriptus*, what one, especially if one were a grower, would really like to see, is a hyacinth that is *scriptus*. The iris, on the other hand, has well-defined marks upon it, such as fancy can easily make sign-writing of sorts; which, indeed, fancy has so made in other tales—the tale of their springing from Ajax's blood and bearing his name upon them, and the tale of their growing from the grave of the illiterate saint, and being marked with

HYACINTHS SCATTERED ON THE SAND

Ave Maria, the sole words of prayer he knew. From all of which it seems one must conclude that the flower called forth by Phoebus Apollo when Hyacinthus died was not what we call hyacinth now.

Not that hyacinths are not of respectable antiquity, quite as respectable as iris. Very long ago they must have made the wreaths at festivals and of bridesmaids in Greece, as they sometimes do to this day; very long ago the Persian poet sang his fancy—

> That every Hyacinth the Garden wears
> Dropt in her lap from some once lovely head.

Though in the latter case, when one thinks of the great hyacinths of the bulb growers, one feels them to be a rather unwieldy decoration for the "lovely head," and likely rather easily to be dislodged and fall to the "garden's lap." But the original *Hyacinthus orientalis*, parent of all our hyacinths, whether it came to us from Persia or from the other side of the Himalayas, as Parkinson's sub-name *zumbul indi* rather suggests, was a very different thing from the hyacinth of to-day. It was a very small, poor thing, not so good as a poor specimen of the white Roman hyacinth that blooms for us at Christmas. Even in Parkinson's

time, when they had been cultivated in Europe for more than fifty years, they were very far from the present hyacinth, indeed nearer to the parent's standard. "They have," he says, "flowers of a fair bluish purple colour, and all standing many times on one side the stalk and many times on both." A hyacinth now that is not flowered equally all round is an unheard-of failure. And in number of florets, too, things are considerably altered; a writer at the end of the eighteenth century speaks of a fine hyacinth truss having from twenty to thirty bells; now the average is from fifty to sixty, and one specimen of the variety *Jacques*, bloomed in Haarlem, had one hundred and ten. All this, of course, is the consequence of careful selection and cultivation, selection and cultivation, and selection again, an art in which the Dutch growers excel, and which is more successfully manifested in the development of the hyacinth than in anything else.

Of all bulbs, hyacinths perhaps are the most typically Dutch; tulips may have the greater name, but other western nations have an interest in them and a tradition of them. We find them in our old memoirs and tales; we see them on the embroidered waistcoats of the beaux of Queen Anne's court, and among the enamelled toys of the

late days of the French monarchy; they are figured in the prim paintings of our great-grandmothers and on the cups of Dresden and Lowestoft china; they even occur on the porcelain fragments that are discovered on the far-off African coast, though probably there they are of Dutch or Chino-Dutch origin. But a hyacinth, a big, full hyacinth, is essentially and entirely Dutch; its very type and standard of beauty is almost national, and nowhere else in the world can the bulb be produced in perfection. In Ghent and near Berlin, in the sandy Spree plain, it has been tried, but never with real success; the production of the true, fine, and perfect hyacinth bulb belongs to the Dutch growers alone.

The bulb, even now after all these years of cultivation, is no trifle to produce, no untended child of a summer's growth. It takes four years, and care and understanding, to raise a marketable hyacinth bulb; four years, or in some very propitious soils and circumstances, possibly three. There are two methods open to the grower who is producing hyacinths: either he slightly hollows the base of the bulb from which he wants increase, or else he cross-cuts it in several directions with cuts nearly half an inch deep. If he follows the latter course, he must bury the bulb after cutting for a

week, so that the cuts may open and remain open. After that he will treat it as a hollowed bulb is treated, that is, leave it alone in the dry warmth of the barn, and in time there will appear between the layers innumerable young bulblets, of sizes varying from a grain of rice to a pea. One may sometimes see on the shelves of bulb barns the swollen and distorted parent bulbs, the young bulbs distending all their coats, waiting in the warmth for the time of planting. The parent, whether cut or hollowed, is planted whole in this state, when a proportion of the young bulbs take individual root and establish a separate existence. When in July the bulbs are taken out of the ground the young ones are found to be nice little bulbs of quite moderate proportions. Not yet, of course, of saleable size nor of the blooming age; they want more years of planting and lifting at the proper seasons before they are the substantial bulbs of commerce. They flower before that time, sometimes in the first but more often in the second year, but they have not come to perfection, and it is not till they are four years old that there may be expected the perfect, big, trussed flower.

Seeing the labour in production one wonders, not that hyacinths are "so dear," but rather that

they are so cheap; also one feels that they are hardly treated with the respect they deserve in England. "They," so it is often complained here, "do so little good the second year, and the offset bulbs, when there are any, are so very poor." But why not? Why should not the offsets be poor? If under the hands of those who give time, and experience, and understanding, they are only good after so much labour, why should they be good without any trouble or labour at all? And for doing well a second year, a hyacinth is as other plants, it has its time of maturity, its gradual approach to it, and its decline: it takes four years to reach its finest under this treatment; afterwards it usually declines from it. The rate and style of the decline will vary, but it is not likely to be delayed by the treatment of the English amateur or in the English flower-bed. "It is," so an old grower once said, "as you may call the flower of one year, but what a flower! It requires four years to make it, then there is the Flower; after that—it is nothing, usually I would not say thank you for it. Ah, but when it is there, it is indeed a Flower! One can respect that!"

In England hyacinths are not respected; the average English gardener now wants something

by the hundred for the border, he does not want individuality. The old ladies who used to grow hyacinths in tall blue and green glasses treated them with more respect. Hyacinth glasses are not beautiful, yet one feels tenderly towards them for old sake's sake,—the memories of drowsy hours spent stumbling over *Easy Reading for the Young*, in a room where the glasses stood on the window-sill when spring had dethroned the red sausage-shaped draught excluder, and the canary that hung between chirped as he peeped first at the white flower in the blue glass and then at the pink flower in the green, and possibly (at least in the stumbling reader's mind) speculated as to whether the ghostly roots to be seen through the glass were a rare and horrible specimen of worm. Those hyacinths were appreciated, the first opening of the flowers noted, the number of bells counted, the scent enjoyed with neighbours not similarly blessed with bulbs. Now we do not grow hyacinths in glasses. We, some people, grow them in pans, where they look very like a small flower-bed moved into the house. Six or eight "miniature hyacinths" (these are the immature offset bulbs of one or two years' growth) crammed in together, where, one would think, they must be very uncomfortable, though it does

not prevent them from each producing a truss of flowers, smaller and looser certainly than that of a mature hyacinth, but giving satisfaction to the uninitiated. Some people grow hyacinths singly in pots, and stand them in rows on conservatory shelves or about their rooms, where they look well if the rooms are solidly Victorian, or furnished with beautiful specimens of cabinet-work in satinwood and tulipwood. Your hyacinth is no modern, no ornament for the furniture and rooms of *nouveaux arts* or culture, and it sorts very ill with half-toned æsthetics or the expensive pseudo-simple. Possibly that may account for its being rather out of fashion in England just now, where few people have a taste for the solidly Victorian, and fewer still the money for the old satinwood of the eighteenth century, or the exquisite tulipwood of France. Long ago it was different; seventeenth-century England admired hyacinths greatly, obtaining, then as now, all the really good ones from Holland, where already they were extensively cultivated. The price fetched by choice bulbs then was high, though never quite equal to that of tulips at the zenith of their fame. Report speaks of £200 being paid for a single hyacinth bulb in the middle of the seventeenth century; but by the end of the

eighteenth £25 was thought extravagant, even for a choice florist's variety. According to a writer in 1796, the price of ordinary bulbs then varied from 3d. apiece to, in rare cases, as much as £10. A fairly wide range, and one that is not so very dissimilar from that of the present time, though it is probable we now have a greater selection at 3d. and a smaller at £10.

Hyacinths in the bulb gardens of Holland are planted in September in very heavily manured ground. In the winter they have to be protected by a thick covering of straw, more, indeed, than is given to any bulbs except some of the lily family, usually from four to five inches in thickness. This is taken off in spring, when the crowns appear; it is essential that they should not be kept covered too long or too closely in mild weather, or the prematurely developed shoots will be too tender to stand the night frosts of early spring. Hyacinths are subject to some few diseases; one of them necessitates the removal of a suspected bulb from among its neighbours. Sometimes one may see a procession of men going forth to the hyacinth fields, each armed with a long narrow tool, in shape a little like the instrument used for cutting asparagus in Belgium; and also, if the weather is sunny, each

"IN EMERALD TUFTS, FLOWERS PURPLE, BLUE, AND WHITE, LIKE SAPPHIRE, PEARL, AND RICH EMBROIDERY."

carrying an umbrella, an article much more used in Holland than in England. The procession, to which the umbrellas give something of dignity if not solemnity, moves slowly along a field, each man taking a row and examining the hyacinths one by one for signs of the disease. With his umbrella he shields the sun from his head and neck, the weather usually seems to be hot on these occasions; with his tool he neatly and cleanly lifts the suspected bulb from among its fellows.

Hyacinth flowers are cut off before their beauty is quite spent, so that they shall not come to seed. Generally speaking, no bulb of any sort is allowed to come to seed, unless of course that particular seed is wanted for the raising of new varieties; to produce seed greatly exhausts the bulb. Hyacinth flowers are cut close down to the leaves; sometimes the cut blooms are scattered over the ground, where other sorts of bulbs, as yet not showing shoots, are growing, this to prevent the light sandy soil from being blown away, leaving the bulbs beneath bare. Some few of the flowers are sold; some, I have heard it said, are used for manure; but the great bulk of them seem just a waste product. As yet nothing has been done with regard to extracting the scent from them, though one

would almost have thought it had been worth while. Of course there would be difficulties in the way, the flowers have too much moisture to allow of their being steam-distilled, like roses and some other scent-providing flowers, and to pomade them, as violets are pomaded, would be rather a costly process.

The hyacinth *Hyacinthus orientalis*, though certainly the great man of the family, as parent of all that are commonly called hyacinths, is, after all, only one of a group. Parkinson gives forty-eight "iacinths," as he spells them. Some of them, it is true, would seem to be only varieties of the same kind, and some are things placed in other classes by modern florists. Still, even without these, a good many remain, and some at least are grown in the bulb gardens of Holland to-day. Grape hyacinths (*Muscari*, because they were supposed to smell of musk) are of these. They are a good deal grown in Holland, and are coming into much favour in England, no one knows why. *Hyacinthus candicans* is also grown in Holland. This, of course, is a newcomer from the Cape, unknown to Parkinson; its tall stalks and far-scattered white bells give it little resemblance in appearance to the rest of its relations. The wood hyacinth, *Nutans*, is also raised,

but is usually to be found under the heading "Squills" in a grower's list. Parkinson classes it with his iacinths, where one would have thought it belonged, calling it *Hyacinthus anglicus belgiciis.* He also classes with them what he calls *Scilla alba*—the common squill of the Mediterranean—the great and important squill of old medicine, which, according to the herbalists, must have been good for everything, epidemic, accidental, and chronic, from worms to toothache, though most especially for consumptive diseases. "The Apothecaries prepare thereof both Wine, Vinegar and Oxymel or Syrupe, which is singular to exterminate and expectorate tough flegm, which is a cause of much disquiet to the body, and an hinderer of concoction, or digestion in the stomach, besides divers other wayes, wherein the scales of the roots being dried, are used. And Galen hath sufficiently explained the qualities and properties thereof, in his eight book of Simples." Pliny, doubtless, explained something of the same, for he, too, wrote of squills. So did that magnificent Dutchman, Clusius, who reports that when, in the true spirit of inquiry, he was about to make personal test of the *Scilla rubra,* he was stopped by the Spaniards, who assured him it was a most strong and potent poison. It is to

be regretted that the Dutchmen of to-day do not grow the *Scilla rubra*, though perhaps it is not unreasonable, for, according to all accounts, it was not much to look at.

Among the flowers much more grown in Holland to-day than in former times iris stands well first. The iris, of course, is an old flower, even though it may have lost its first Greek name, and taken another after that rather overworked personage, the cutter of life's threads and rain-bringer, Juno's rainbow-winged messenger. Under various names the iris, whether tuberous or bulbous, has figured a good deal in history and legend. There has even been controversy about it, whether Shakespeare meant an iris or a lily when he spoke of fleur-de-lys in another than heraldic sense, and whether Chaucer did.

It is quite clear the old masters of medicine understood "flower-de-luce" as iris, whether they spoke of "the bulbous blue kind" or the tuberous "flaggy kind," the white flag of Florence, from which they, as we, derived orris root, and the common yellow flag from which they derived other things which we do not. Their descriptions and receipts for mingling the extract with honey to mitigate the sharpness of its attack upon the

stomach (!) have come down to us to convince us that they knew the iris; also that they, such of them as survived, were stouter men inside than their decadent descendants.

Of late years iris, dethroned from an honourable place in medicine, has come much into fashion as a garden flower. Not without reason, many sorts are easy for the amateur to cultivate, and all are very effective. The variety among them is enormous; not only are there in the hands of growers many comparatively new discoveries from North Africa, Central Asia, Asia Minor, and South Europe, but the improving and altering of all the families, new and old, has made the varieties wonderful both in number and beauty now. Large quantities of iris are grown in Holland, some of the rarer sorts and still more of the cheap and well-known kinds. In June one may see fields of Spanish Iris (*Iris xiphion*), exquisite, delicately-tinted flowers, quivering at the top of their grey-green stalks. Blooming, as they do, when most of the other bulb flowers are over, and when, in the early days of the industry, most of the fields must have been rather bare, they have a separate and special attraction. They are very nearly hardy bulbs, and withstand the winter's cold with little

protection. They are little trouble in the growing, and are lifted at the end of July, when the greater number of other bulbs are already harvested. They increase fairly well, and the young ones have the further advantage of coming to maturity in a comparatively short time. New varieties, as is almost invariably the case with bulbs, are obtained from seed. One may often see small patches of new sorts, of which the grower has hope, flowering beside large quantities of the established kind, this for the sake of comparison, and to determine if the new is really new, and has anything worthy of preservation. The original bulb of Spain is said to have been blue flowered, the yellow influence coming from Portugal; but the crossing and blending of the two, whether started by art or nature, was begun too far back to be recorded. It is impossible to trace the history of many of the innumerable and beautiful shades and blends that exist now.

Iris anglica is another striking feature of the bulb gardens in early summer, coming into flower just when the Spanish are over, and presenting a more gorgeous and striking effect. It is a native of the Pyrenees, and no relation in root or anything else to the tuberous-rooted flag-irises of

England. The Dutch growers had it, in the first instance, from English sailors or merchants, and either mistook its place of origin or named it after the nation from whom they received it. The flowers, with the extraordinary variety they show, their somewhat stiff method of growth and great development, are decidedly more typical of the nation of gardeners than of the nation whose name they bear.

Among the irises, both bulbous and tuberous, now grown in Holland I regret to say I have not been able to identify the iris of Clusius—"Clusius his first great Flowerdeluce." "This Flowerdeluce hath divers long and broad leaves, not stiff like all the others, but soft and greenish on the upper side, and whitish underneath." The flower was "of a fair blue, a pale sky colour in most," and showed in the six lower petals a tendency to turn up at the edges, the three smaller and upper of these parting at the lip and standing up "like unto two small ears." The description of the flower reads a little like a Spanish Iris, and the native place was clearly Spain; but the leaves sound quite different to those of the Spanish as we know it, also the time of blooming is placed too early. The flower is described as very sweet of scent, and "the root

is reasonable great." Doubtless, towards the close of the sixteenth century it was to have been seen blooming in the famous garden at Leyden; perhaps some descendants are still to be found in that city, yearly honouring the great man who named them, and helped to make the city famous. But in none of the gardens round Haarlem have I seen it, and in no grower's catalogue does it figure, at all events under its original name.

Irises, besides being among the latest of the bulb flowers, are almost among the earliest. In early March one may see *Iris reticulata*, *Bakeriana*, *histroides*, and a few other delicate-looking specimens blooming in surroundings which look singularly unsuitable to them. But these, as yet, are very little grown, are somewhat costly, and still in appearance something reminiscent of their Asiatic homes. None of them are recorded to be natives of Europe, although I myself have seen irises surprisingly like *Iris reticulata*, which were found by their present owner growing wild in Spain. They were, when I saw them, blooming under a north wall in a garden not far from the Scottish border, this in a March blizzard, and they had done so for some four years in succession. In colour, shape, and scent they were exactly like

SPANISH IRISES

reticulata, but whether or no they were truly so I cannot say.

Among the more striking of the flowers to be seen in Holland now, *Iris susiana* certainly deserves mention. It is not a bulb iris but a spreading rhizome, in growth more like the *Iris germanica*, though in appearance quite unlike. It was introduced into Holland somewhere about 1570, and has been grown there practically without development or variation ever since, but the days of its market popularity are comparatively recent. Twenty years ago it is doubtful if there were fifty of the strange flowers (they look rather as if they were made of Japanese newspaper) to be found outside the Dutch gardens. Certainly in England they were then very little known. And yet Parkinson, writing in 1629, gives them an important place among the then known irises. There can be no doubt whatever that the *Iris susiana* of to-day is what he calls the Great Turkey Flowerdeluce, "the roots whereof," he tells us, "have been sent out of Turkey divers times among other things, and it would seem that they have had their original from about Sufis, a chief city of Persia." His description of the

flower tallies exactly, and he notes the peculiarity that the petals "being laid in water will colour the water into a violet colour, but if a little Allome be put therein, and then wrung or pressed, and the juice of these leaves dryed in the shadow, they will give a colour almost as deep as Indigo, and may be used for shadows in limning excellent well." The flower of the *Iris susiana*, if left in water or even allowed to rot in the ordinary way, produces a very strongly-coloured juice of a bluish violet tint. There really is no room to doubt that the two irises are the same, though how it happened that the then and now valued flower went so out of English cultivation, almost out of English knowledge, it is difficult to say. One imagines that there came a time when no one appreciated its "singularity and rarity"—the only charms it has to offer—and it was allowed to die out. Without care, of course, it would not thrive or increase. It seldom bears seeds in these colder countries, and the very few that are occasionally borne never ripen. And it would hardly have increased by spreading,—as a rhizome if left undisturbed for long it would always die in the centre of every clump it formed, only living at

the edges, and in an unpropitious climate and circumstances it would speedily dwindle away. Anyhow, it would seem to have happened, the Great Turkey Flowerdeluce left us, to return *Iris susiana* many years later, when the tide of taste, which has changed many things and relegated the formerly admired hyacinth to a secondary place, has put all irises into fashion, and exalted this neglected flower to favour and admiration. Such a fate has occurred before this to flowers and books and men; to the books it matters little, they have time to ripen; to the men—*post cineras gloria sera venit.*

CHAPTER IV

SOME OLD FAVOURITES AND NEW

EXACTLY what influences favour in flowers, or indeed in most other things, it is hard to say; no Dutch bulb-grower ever attempts to do so. It may interest the leisurely student of mankind to discover the causes and trends of fashion, but the grower asks little or nothing about it, he merely accepts the evidence of his carefully-kept books, and the character of the attention given to some certain flower or groups of flowers at the shows, and sets himself to supply the demand that has arisen, or is about to arise. He may regret, if he is an old man with old-fashioned tastes, that popular liking has deserted *Ranunculus asiaticus*. He may, if he is a young man, himself sharing the general taste, prefer the dark-eyed *Anemone coronaria* to the rosetted flowers of earlier favour. But he will certainly

A BULB FARM NEAR OVERVEEN

give greater space to the latter now. Both of these two are grown in Holland, and both in something the same manner, though ranunculi want a heavier and moister soil than anemones. There is one kind of ranunculus, the *Turban ranunculus*, which is planted in December and covered rather thickly to protect it from frost, but the *asiaticus* is treated just as anemones are. Both are set in early spring, both harvested in August; both are strikingly beautiful when in flower, making very gorgeous stripes of colour in the garden where they are. Both are old flowers in Holland, they were certainly there by the middle of the sixteenth century; we in England had anemones from thence somewhere about 1596, ranunculi probably not much later. Both have been much cultivated and varied; but the one, *Ranunculus asiaticus*, is curiously out of favour, especially in England. Fifty or sixty years ago there were as many as eight or nine hundred varieties catalogued, now there are not as many dozen. In England we know that the early Victorians approved the ranunculus; indeed, in the old *Language of Flowers* the scentless rosette blossoms are given an honourable place. An admirer giving a bunch (we do not

conceive of anyone giving them now, unless it is one grower to another similarly interested)—an admirer giving them in 1840 could convey the compliment, "You are radiant with charms." In the opinion of those times "the dazzling Ranunculus adorns our gardens with its brilliant flowers, glowing with a thousand colours, resplendent with a thousand charms. Scarcely any plant affords so rich a view." Now we think quite otherwise.

Anemones at that same time stood for the melancholy word "Forsaken"; this probably on account of the Greek legend of their origin,—a legend of the order not unfamiliar in Greek mythology, the loves of the gods, the jealousies of the goddesses, the metamorphosis of the object, and the desertion of the lover. In this case Zephyr, who abandoned the nymph, thus transformed by Flora, to the rude caresses of Boreas, who, unable to gain her love, shakes her afresh every spring. This legend probably belonged, in the first instance, to the earlier blooming Star Anemones and Hepaticas, those flowers at whose opening old gardeners used to say, "the earth is in love, now is the time to sow." These, too, are grown in Holland, and have been since the day when

Clusius first brought there the yellow anemone he found at the "foot of St. Bernard's Hill near unto the Canton of the Switzers." Since the days, too, when the old herbalists used the leaves of some sorts in "the ointment called *Marciatum*, which is composed of many other hot herbes, and is used in cold griefs, to warme and comfort the parts." And even if they and the *Anemone coronaria* do not now fetch the high prices they did when they were among the collector's fancies, they are still a good deal in demand.

Among the flowers grown in the bulb gardens of to-day which favour has treated somewhat strangely the Fritillaria family should certainly be mentioned. The Crown Imperial, king and chief of the Fritillarias, is grown now as it was in the early days of the bulb industry; the big lily-like bulbs are treated in much the same way, and the old varieties are there with comparatively few new ones added to them. In the sixteenth and seventeenth centuries Crown Imperials ranked high among flowers. Parkinson gives them the place of honour in his *Garden of Pleasant Flowers*, and, in the pretty way of the old writers speaking of a loved or admired object, lifts them from the neuter to the gendered class: "The

Crowne Imperial for his stately beautifulness, deserveth the first place in this our garden of delights." And judging from some of the legends that have gathered about the flower, one imagines it was cultivated and admired even earlier. But during the nineteenth century it went out of favour, for some reason the "refined and elegant" ceased to admire it and gardeners to cultivate it, other flowers filling the place in popular favour.

> No gorgeous flowers the meek Reseda grace,
> Yet sip, with eager trunk, yon busy race
> Her simple cup, nor heed the dazzling gem
> That beam in Fritillaria's diadem—

wrote a drawing-room poet of the early nineteenth century; and though the beautifully banal—also botanically and every other way incorrect—lines must not be regarded as exactly expressing the minds of his compeers, yet the fact that they were written and quoted shows favour was not then for the Crown Imperial. It is coming back to the present generation; possibly, in England at least, because a certain number of the old bulbs were preserved in cottage gardens, and so acquired the reputation of simplicity and old-fashionedness, now so frequently a passport to favour.

But though the Crown Imperial is being grown

"THEY SPRING, THEY BUD, THEY BLOSSOME FRESH
AND FAIRE, AND DECKE THE WORLD WITH
THEIR RICH POMPOUS SHOWES"

Mima Nixon. 1905.

in Holland and coming again into favour in England, it is the smaller members of the Fritillaria family that are more really popular,—the little Snake's-head Fritillary, which in some of its duller colours is native to Oxfordshire, the red *Recurva*, the golden yellow *Aurea*, and other expensive varieties of the somewhat insignificant flower. They may all be seen in Holland, and are regarded with considerable admiration, even by some of the old and conservative growers. I remember to have seen one dear old man kneeling before a *Fritillaria aurea* gently dusting off the sand which had blown upon its fluffy inside.

Among the new favourites begonias should perhaps be mentioned, although they are not grown in Holland to anything like the extent they are in Belgium, where they are raised literally by the million; or in England, where the great florists, Laing and Veitch, have done so much to popularise and improve them. They were introduced into Europe about 1776, from Jamaica in the first instance, though subsequently from other places too; but they do not appear to have been much cultivated and developed until comparatively lately. Certainly it was not until quite recently they were to be seen in the bulb

fields of Holland; now they are, and they make very gorgeous patches of colour in the middle and late summer, when there are few other flowers to be seen. The treatment they require is unlike that of the Dutch bulb proper. To begin with, they are tubers not bulbs; to go on with, they are not planted out till May; and to conclude, they must be stored in dry and frost-proof houses during the winter months. New varieties are raised from seed, and in Holland time and attention is being bestowed on them, so that it is possible they, too, may rank among important Dutch flowers, though at present they can hardly be said to do so, popular as they are in this country.

But perhaps of all bulbs grown in Holland the ones which have least felt the variation of favour for the past three hundred years are Narcissi. Doubtless they have not always been grown in quite such quantity as they are now, but they have for very long been grown to a considerable extent. They have never had the immense vogue that tulips and hyacinths had at one time, but they have always been well appreciated. It is true that in Holland to-day amateurs, though they think well of them, do not as a rule specialise in them, as do many English; one has to go to England to find

discriminating appreciation of a finely-formed flower among amateurs. But the growers in Holland know their business, as they have for very many years, and splendid Narcissi are raised there for the English market.

Early in the seventeenth century we hear of the "Men of the Lowe Countries" growing "iohnquills" and calling them "trompetts." Even before that the still popular *Narcissus maximus* was a favourite flower in Dutch gardens, and we know that the great botanists of the late sixteenth and early seventeenth centuries were eager in their search for and raising of new varieties. We have record of "the Lady Mattenesse Daffodil" named of Clusius, the first gallant Low Countryman to name a new variety after a lady. This flower would seem to have borne more resemblance to some of the ordinary yellow sorts than to the choice *N. Clusii*, which later generations have named in honour of the great man himself. There are records, too, of that which was first had from Vincent Sion, native of Flanders, "an industrious and worthy lover of fair flowers," who, however, did not name his flower after himself or a lady, but grew it and at some time gave offsets to "Mr. George Wilmer of Stratford Bowe, Esquire, who would need appropriate it to himself,

as if he were the first founder thereof, and call it by his own name, Wilmer's double daffodil,"—a proceeding justly condemned by the botanists and avenged by time; for whereas to-day one looks in vain for *Wilmer* in the ordinary catalogue, *Van-Sion*, whether or no named after the "industrious lover of fair flowers," is a household word with daffodil growers.

In seventeenth-century England, as well as Holland, they would seem to have been interested in the raising of Narcissi and the varying of the sorts. We have *Gerrard's Daffodil*, and *Parkinson's Daffodil*, and the *Great Rose Daffodil* of one John Tradecant. It should be remembered that narcissus and daffodil were synonymous terms with the old writers, the one being regarded as the Latin, the other as the English name of the family. It must also be admitted that they classed as Narcissi things that we do not reckon as such, for instance, the *Strange Sea Daffodil* of Parkinson's list, a plant which, from picture and description, one is inclined to identify as a dark-coloured Agapanthus. Also the *White Sea Bastard Daffodil*, which Clusius tells us is so poisonous that it was "deadly to him that did but cut his meat with that knife which had immediately before cut this root." Another nar-

cissus unknown to us now is the red flower, native to the West Indies, mentioned by Parkinson. It is true he classes it reluctantly in accordance with the then taste for classifying rather than with his own conviction, and with the remark, "Even so until some other can direct his place more fitly, I shall require you to accept of him in this, with this description which followeth." And the description certainly does not apply to our idea of a red narcissus, that desideratum of all modern growers. The growers of the past do not seem to have been so anxious to produce a red variety, but to-day it is the ambition of all professionals and many amateurs. So far one cannot say they have been successful, the variety *Will Scarlet*, a short-crowned flower belonging to the *incomparabilis* section, is the nearest, but it is not satisfactory, and is of a very poor shape.

In Holland Narcissi are put in the ground just as summer turns to autumn. In the fields they are set from three to four inches deep, and during the severe weather protected by a straw covering some three inches thick. At least that is found sufficient for the hardier roots, the more delicate polyanthus varieties want more, many of them requiring as heavy a covering as is given to hyacinths.

They begin flowering about the middle of March. Some English daffodil enthusiasts maintain one can have them in bloom out of doors from February to October, but personally I have never seen any at either extreme date. In Holland, certainly, they do not reckon to have flowers in the open much before the middle of March, when the earliest sorts, *Henry Irving*, *Golden Spur*, etc., begin to show colour. The majority are in perfection in April, and the latest sorts, such as *Poeticus* and *Grandee*, carry us on well into May ; but by the end of that month Narcissi are over in the bulb gardens. In the middle of April the sight is truly magnificent, sheets of golden flowers in every shade of yellow ; one feels a miser's wish to keep the living gold and put off the inevitable time of cutting. The flowers, when they are cut, are taken at the top, much as tulips are, the stalks and leaves being left to gradually wither, till in July when the bulbs are lifted they are quite dead ; a sad and rather desolate sight.

Narcissi are very various in their rate of increase, some free-growing sorts, such as *Emperor* and *Empress*, *Sir Watkin* and *Barri* increase well ; but others much more scantily and slowly. The polyanthus narcissi (*N. Tazetta*) do not in the main increase so well as most of the other kinds. The

BULB TIME, HAARLEM

Mima Nixon. 1906.

reason of this may be that they are none of them native to Western Europe, though they have been long grown and much improved there; their original home is South Europe and Western Asia, from whence it is thought they spread at some almost prehistoric time to Northern India, China, and Japan. One rather insignificant species has of recent years been introduced to Europe from Japan, and for the moment made a sensation among amateurs out of all proportion to its merits. There is a small kind very plentiful in Greece to-day; from its plentifulness some folk have decided it was the original flower of the Greek legend, but the consensus of opinion is in favour of a single-flowered one of the Poeticus family—also still to be found in abundance in Greece. Ovid's description certainly best fits the latter, as will be seen from the following translation of his account of the flower and the metamorphosis of the boy.—He was but sixteen, according to Ovid, so his flight from the overtures of Echo and his subsequent astonishment at and passion for his own newly-discovered beauty are perhaps forgivable; at all events more forgivable than the admiration of many a subsequent poet Narcissus for himself and all his works.

Soon the rosy flush has left his cheek, and all his goodly strength is gone, and the very form that Echo once had loved. He lays his weary head on the green grass, and darkness covers his longing eyes. And now he has entered the halls of the dead, and in the Stygian wave still gazes on his own image. The Naiads, his sisters, with tresses torn, weep for their brother, the Dryads wail aloud, while Echo wails again. And now they make ready the pyre and the funeral torches and the bier. But in vain they seek the dead; they find but a flower of golden (croceum) hue, its heart enringed by (set round with) white leaves.[1]

It is interesting to quote, in comparison with this, the rendering that the poet Gay gives of the old tale of the transformation :—

> His spreading fingers shoot in verdant leaves:
> Through his pale veins green sap now gently flows;
> And in a short-lived flower his beauty blows.
> Let vain Narcissus warn each female breast
> That beauty's but a transient gift at best;
> Like flowers it withers with th' advancing year,
> And age, like winter, robs the blooming fair.

Slightly suggestive of the boy in *Struwwelpeter* who took root and grew sprouts because he would not move when he was told, but eminently moral.

But whether or no the flower of "vain Narcissus" fame was a polyanthus or a Poeticus, this is certain, varieties of both kinds grow in Greece, and apparently have grown there as far

[1] I am indebted to Miss Camilla Jebb for this translation.

back as anything did. Over and over again Narcissi occur in classic literature, often with the qualifications purpled or croceum, which suggests the dark centred Poeticus. Sometimes they are spoken of as the flower of death, the treacherous sweet-scented blossoms, beguiling in sweetness and stupefying in effect. Plutarch definitely says they derived their name from *narce* = numbness, because of this effect. No such effect is known now; narcotics in plenty we have, and most of them of vegetable origin, but none obtained from narcissus. Still, evidently there is some such tradition in connection with them, for more than one old writer has regarded them as the flower of death. Milton possibly had some such tradition in his mind when in *Lycidas*, his *In Memoriam*, he says:

> daffodillies fill their cups with tears,
> To strew the laureate hearse where Lycid lies.

This reference is, of course, to the English wild Narcissus, the little yellow daffodil of woods and meadows, no doubt more plentiful in his day than in ours.

Then, one hopes, there had not begun the reprehensible custom (described at the close of the eighteenth century) whereby, "In the counties

round London the herb-folks bring prodigious quantities in the spring of the year, when in bloom, root and all, and sell them about the streets." Still, in spite of the efforts of the "herb-folk" and others, there are wild daffodils yet to be found in parts of England and Holland. And, on good authority it is stated, all the uniflowered varieties of to-day are sprung from it; and of those varieties one may say, as Parkinson did of the *Bastard Daffodils of Divers Kinds*, "There is much variety in this kind; . . . but it is needless to spend a great deal of time and labour upon such . . . flowers, except that in the beholding of them, we may therein admire the work of the Creator, who can frame such diversity in one thing. But this is beside the text, yet not impertinent."

CHAPTER V

THE ARISTOCRAT OF THE BULB GARDENS

The Tulip is the aristocrat of bulbs, the one with whose name is connected squandered fortunes, romantic tales, long history, and other attributes of traditional aristocracy. It is also the one which, more than any, has made Holland famous. To go to see the bulb gardens usually means to go to Haarlem towards the latter part of April, when the tulips are at their best and there are literally acres of flowers. A patch of seven hundred square metres of scarlet tulips, and beyond perhaps as much of yellow or white, and beyond, with nothing but a hedge between, others, yet others, everywhere.—It is a wonderful sight. Red tulips and purple tulips, rose colour, buff colour, yellow and white and streaked. Though it must be said the streaked tulips are less than they were, for they are somewhat out of fashion

now; it is the plain-coloured varieties which are most in favour, more especially the late "cottage" sorts. In earlier days, in the time of the tulip mania—at its height about 1634 to 1637—the fashion was for variegated tulips, and the enormous prices that were given were for streaked and pencilled, late blooming, single flowers; and the more they were striped, violet and rose on a pure white ground, the more was paid for them. The following description of what a tulip should be was written between 1790 and 1797; the prices by then had dropped to comparative moderation, but the standard of beauty was much the same: "The colours in greatest estimation in variegated tulips are the blacks, golden yellow, purple violets, and rose, and vermilion, each of which being variegated various ways; and such as are striped in three different colours distinct and unmixed, with strong regular streaks, but with little or no tinge of the breeder, may be called the most perfect tulip." Some of the varieties famous in the early days are still grown in Holland, *Louis the XVI.* and the notorious *Semper Augustus*, one bulb of which is said, at the height of the madness, to have been sold for as much as 13,000 florins, though the price dropped to fifty when a paternal government

TULIPS IN THEIR PRIME

Mima Nixon. 1908.

stepped in and put an end to the gamble. Now, though these two historic names are still known and the bulbs still grown, neither flower is of great repute for beauty, and, generally speaking, neither would be so much admired as the self-coloured sorts—the scarlet *Gesneriana spathulata*, with its intense blue-black centre, the snow-white *Dora*, or even the insignificant little red flower, for a single bulb of which eight guineas was asked in London not many years ago. Asked and readily paid too; from which, one may conclude, the real tulip mania is not quite dead, though, of course, the price is a mere trifle compared to those paid in the early eighteenth century, or even as late as the beginning of the nineteenth, when, it is reported, a florist of Amsterdam paid £640 for the bulb of a new species, *The Citadel of Antwerp*. This last man must have been either a cultivator or a collector buying for the sake of having the bulb, for by then the gamble, which largely made the great mania what it was, had long passed away. When the mania was at its height men obviously did not buy for that reason. The madness, which then inexplicably affected so large a part of the steady Dutch nation, was more nearly related to a Stock Exchange gamble than a collector's craze;

though one cannot help thinking that, without the real existence of the latter the former would not have been possible, at least not in that manifestation.

There are still many tales told of that time, some supported with sufficient evidence, some resting on report, all equally remarkable. To the first class belongs that which can be found in the registers of the city of Alkmaar, where in 1637 there is an entry of the sale of tulips for the benefit of the Orphan Hospital, when 120 bulbs were sold for 9000 florins—a florin then about represented a bushel of wheat, so the approximate equivalent of that sum in modern money is rather startling even for gambling prices. To the latter class of tales belongs that of the man who believed himself to be the possessor of a unique tulip, and, hearing that there was another like it in Haarlem, repaired to that city, bought the bulb at great cost and crushed it with his foot, so that his tulip should really be unique. There is the other tale of the sailor, who, having been given a raw herring at the kitchen door of a rich merchant and a tulip fancier, picked up some roots which were lying outside, cooked them with it, and ate them, thinking them to be onions, and unaware that they

were priceless tulips. Which last story is somewhat hard to believe, for if the rich merchant and tulip fancier was anything like the Dutchmen of to-day, he would not have left his priceless bulbs lying about, either by his kitchen door or anywhere else. And if the sailor was so really foolish as, at that time when tulips were the things of moment, to mistake an uncooked one for an onion, he would have been better informed about a cooked one. He would not, as according to the tale he did, have needed enlightening by the merchant, who is narrated to have exclaimed, after the event: "Inconsiderate man! Thou hast ruined me with thy breakfast! I could have regaled a king with it!" If the king had been so regaled, at least with cooked tulips, it is possible the royal pleasure would not have been great, for tulips, according to those who have tried them, are very poor eating. Parkinson, certainly, says they are pleasant, though truth compels him to qualify the statement by adding, "at least, not unpleasant." He, by his own account, tried them preserved in sugar, and apparently did not persevere with his experiment, as he ascribes no medicinal value to them.

It is the custom to say that the romance of

tulip-growing has gone; it is wonderful how often Romance is announced as dead and gone, a many-lived thing one must think it to need so many death-knells. Tulip-growing now, it is said, is a mere commercial enterprise, a growing without interest of hundreds of thousands of the cheapest sorts and selling them for the best price obtainable; no longer any interest or individuality in it, no one thinking or caring for new sorts or history, or anything but price per hundred. It may be; romance is a strange thing; whether the term is applied to flower or adventure, callings or institutions, it does not really refer to the concerned actors and doers, but to the sentiments and opinions of the unconcerned lookers-on. These unconcerned at one time had a craze for tulips,—then tulips were romantic; now they are not, and romance is gone. Now these folk merely order, or let their gardeners order, so many red and so many white, so many double, single, striped, or plain. There is no more romance now to them in tulip producing and buying than in grocery producing and buying: that is to say, they talk little more about the one than the other, their horticultural conversation is now centred on hybrid teas and herbaceous borders. It was not so a hundred years ago, tulips were

"HERE ARE TULIPS FOR YOU—WHITE, FOR THE BRIDAL OR THE BURIAL"

then in fashion. In an old miscellany of that time there is a delightful conversation on the tulip subject, the writer purporting to have overheard a talk between two people he could not see on the behaviour and condition of persons of importance. Very strange behaviour it sounded—how a crowned head was feeling the weather, how a favourite general was doing well, seeing his situation, and, finally, how one speaker would show the other a *Painted Lady* and a *Chimney Sweep* in the same bed. The writer describes himself as hastening after to share the sight, and as being delighted to find the conversation referred to nothing scandalous, but to "the beautiful vegetables" then in fashion. He may have been delighted, we can give him the benefit of the doubt—possibly he did not frequent country houses and large suburban villas. He could hardly have done so, else the talk would not have had the charm of novelty for him, for wheresoever two or three glove-gardeners are gathered together—or even where there is only one—the specific names of varieties of the flower then in fashion fall like rain on the interested and uninterested alike.

Not that the Dutch grower has any quarrel with the glove-gardeners, he has none at all; if

the trend of fashion prevents them from buying expensive and choice tulips, it also prevents them from caring for the ones they do buy, and so necessitates the frequent replenishing of their stock. They are the grower's chief purchasers, and though he feels a little hurt when they, ignoring his plain directions for cultivation, and getting poor results in consequence, complain of the quality of his bulbs, he never gainsays their taste in varieties. On the contrary, he compiles his catalogue to what he thinks is their fancy, and grows by the acre whatever they and their gardeners ordain to be beautiful. But the real interest and life of bulb-growing did not begin with the enthusiasm of folk of this kind, nor did it die when that died. The true grower still feels a holy joy over a new streak of colour, a new shape of petal; he still has his collectors over the world looking for novelties; he still sows and hybridises, and patiently and intelligently works, and feels the connoisseur's satisfaction in success, his own or another's.

Tulips are grown in Holland to-day much as they were two hundred years ago. The land is very deeply worked in winter, so that the frost may penetrate and kill mice and other vermin;

also if, as is not often the case round Haarlem, the ground is stiff to soften it fit for the bulbs. In the spring it is manured: for tulips there is not such heavy manuring as for hyacinths, these last are by far the fattest liking of all the bulbs. It is possible, in fact it is often advisable, to grow tulips one year on the ground which was used for hyacinths the year before, this without any further enriching. After the spring manuring many of the bulb fields are let to market men, who grow vegetables there, but with the understanding that all must be removed and the ground cleared in August, for, though tulips are not put in until the end of September, some other bulbs are planted earlier, so the rule is usually made to apply to all fields. The tulip bulbs are set by hand, four or five inches apart and four inches below the surface, and left untouched until it is time to cover them with straw for the winter. The covering in their case is very light, not more than half an inch thick, for tulips are perfectly hardy, and need no protection from the cold; but the sandy soil is so light that, unless something were put on it, it would be blown away in the high winds and the bulbs left bare. The flowering time covers a good while, beginning in mild springs with *Duc van Tholl* in the early

days of March, and ending with the late-blooming May varieties well on in that month. There is one rare specimen of tulip from Central Asia, *Tulipa kaufmanniana*, which flowers in Holland in February, but as yet this is not widely grown. It is, unfortunately, necessary to cut off the flower heads of all varieties, excepting such as are being saved for seed, before their beauty is quite spent. Happily, however, the cutting does not have to be done too soon after the opening, unless the weather is very rainy. Wet engenders some disease in the flower, which goes downwards and infects the roots unless the blooms are cut off in time. They are usually cut stalkless, really beheaded; rows of them so treated are rather a woful sight, although the delicate colour of their broad leaves makes the gardens where they are still beautiful. In June they are taken out of the ground. The new young bulbs are found to be developed from within the old, which gradually shrivel away to give room to the young; in the end there is nothing of the parent left but a few hard scales, which can be removed by hand.

New varieties are usually raised from seed, though some are sports; there is at Haarlem one such now, a fine yellow tulip, which, a few years

ago, "sported" from a well-known red variety; the man who owns it found it when the bulbs were in bloom. It is not a "rogue" but a true bulb, in leaf and flower representing the old red type, only in colour yellow instead of red.

The ways of seedling tulips are rather strange; when they first flower, which is sometimes not till they are as much as seven years old, they are usually self-coloured. But in a few years' time they "break," that is, the flowers are no longer self-coloured but variegated. When this will happen it is not possible to foretell, sometimes, most usually, within two or three years of first blooming; sometimes, though not often, not till after five-and-twenty or thirty years. The reason of this remarkable peculiarity does not seem to be clearly understood. Parkinson, it is true, offers one: "All such flowers not having their originall in that manner (for some that have such or the like marks from the beginning, that is, from the first and second years flowering, are constant, and doe not change), but as I said, were of one colour at the first, do show the weakness and decay of the roots, and this extraordinary beauty in the flower, is but as the brightness of a light, upon the very extinguishing thereof, and doeth plainly

declare that it can doe his master no more service, and therefore with this jollity doth bid him good-night." Unfortunately modern experience proves this to be incorrect, for the variegation when produced usually continues without reversion to the self-coloured original for an indefinite length of time. There are certain distinct types in the variegations. Robinson describes them as follows: "A feathered tulip has the colour finely pencilled round the margin of the petals, the base of the flowers being pure; in a "Flamed" flower stripes of colour descend from the top of the petals towards the base. In the Bizarres the colours are red, brownish-red, chestnut and maroon, the base being clear yellow; in the Bybloomens the colours are black and various shades of purple, the base being white; and in the Roses, rose of various shades, and also deep red or scarlet, the base being white again." Most of which variegations, though still much appreciated by some people, have not the place in popular admiration they had two hundred years ago, or even as recently as one hundred, some of the authors of which period give simple directions for the helping of nature in "effecting the marvellous work of breaking the breeding tulip into diversified colours."

"WHOSE LEAVES WITH THEIR CRIMSON GLOW
HIDE THE HEART THAT LIES BURNING AND BLACK
BELOW"

Seeing the admiration of these connoisseurs of the past for streaked tulips it is surprising we hear little or nothing of the Parrot (*Tulipa turcica*). In some form it must have been in existence at the time of the mania, for Parkinson, writing earlier, mentions among his "mean flowering tulips" something which appears to be it. It is classed as a subdivision of the "Yellow Fool's Coat" tulip, and is described as "of a paler or yellowish green passed with yellow and called the Parret, with white edges."

Striped or streaky flowers appear always to have been the florist's ambition. Nature, in the general way, is not much addicted to the unaided production thereof; probably it is for that reason that growers have always regarded them as choice. As far back as Shakespeare's time pied or striped flowers would seem to have been the choicest; "the favourite flowers o' the season," Perdita says, "are our carnations and streaked gilly'vors." The taste of the general public on the subject may vary—a Perdita of to-day would not feel it necessary, as Shakespeare's Perdita did, to apologise for not growing the admired streaked gillyflowers; but the taste of the florist is more faithful, he knows the art of the thing. It is

he, also, who truly appreciates the double flower. Nature of herself does not very often double flowers, man invariably doubles every kind he can so soon as he takes it into cultivation. Tulips have been doubled very long, and were at one time much admired, though they are thought less of now. In England, at all events, they meet with comparatively little patronage, excepting a few dwarf sorts used for forcing and for carpet-bedding, and some large white ones which, when wide open, find a place in bouquets and floral trophies, where they look rather like peonies.

The history of the origin of the tulip as we have it is somewhat lost in mist. Robinson says *Tulipa suaveolens* from South Russia is now regarded as the type of the numerous early flowering tulips (*Duc van Tholl*, etc.), but the finer, later forms, which open in May, have all come from *Tulipa Gesneriana*. Some of the Dutch growers, on the other hand, regard the *Gesneriana* as the parent of all the garden forms; which also seems to be the opinion of some of the eighteenth-century English writers, who give Cappadocia as the home of the bulb. Various native lands have been ascribed to it: Turkey, South Russia, Asia Minor, and what is called "the Levant"—in bulb history

a wide and vague locality—have all been suggested as the source from which we derived it. But from wherever it came to us, it seems likely that the original home of the bulb was Persia; from whence probably it spread to all the above countries, if not before historic times, at least very long ago. Tulips have long been known and admired in Persia; they were clearly as much a commonplace of poetry in the time of Omar Khayyám as the nightingale and the rose—

> the Tulip for her wonted sup
> Of Heavenly Vintage lifts her chalice up—

he writes, or we presume he writes, since the lines with very little variation appear in all editions of the Quatrains.

The tulip is said in the East to be regarded as a symbol of declared love. The writer of my grandmother's *Language of Flowers* is less agreeable in his symbolism. "On account of the elegance of its form," he says, "the beauty of its colours, but its want of fragrance and other useful qualities, this flower has been considered as an appropriate symbol of a female who possesses no other recommendation than personal charms." Which is rather severe, and inclines one to suggest

that the good man, if he really felt that a flower should possess useful qualities, might have tried this one, as was recommended in the early seventeenth century, for "cricke in the neck." The eastern lover more poetically symbolised the condition of his love-inflamed face and burning heart by the gift to his adored of the flower :

> Whose leaves with their crimson glow
> Hide the heart that lies burning and black below.

From the description it is clear that the Persian tulip was self-coloured and red, possibly something like the *Gesneriana spathulata.*

The date of its coming to Western Europe is not much more certain than the actual place from whence it came. The introduction has been ascribed to Busbecq, ambassador from the Emperor Maximilian to the Porte—it is astonishing how many flowers that enterprising man is accredited with introducing to his own and other western countries. He is reported to have seen tulips in bloom on the road between Adrianople and Constantinople in mid-winter, and, struck with their beauty, brought some home with him. Then there is the story of a bulb being brought to England by a sailor and given by him to an

apothecary's wife, as a token of his gratitude for her kindness to him in sickness. According to this story, the bulb first bloomed in 1557, but according to some authorities tulips were not seen here at all until 1577. The sailor story, when told in detail, offers several other difficulties. It rather presupposes that the man thought the bulb of value, which he might or might not have done. And it certainly demands that the recipient of it should have been a good gardener and woman of business, for she is narrated to have at once grown and multiplied her tulip and sold the offsets for a guinea apiece—a large price in Elizabethan England for a new and as yet unfashionable flower, introduced merely by a country apothecary's wife. It also puts the date of the first flowering in England as 1559, the date when, it is said, Conrad Gesner, the Swiss botanist and name-father to the *Gesneriana*, brought the tulip from Constantinople to Augsburg. There is another story which ascribes the first introduction of the tulip into England to Sir Philip Sidney, who is reputed to have brought it from the Continent. Personally I prefer that account; it is in keeping with the character of the great Elizabethan, also it offers less difficulties. Sidney, we know, was on a diplomatic mission to the German

court, where he made a friend of William of Orange; this in 1577, by which time tulips, whether first introduced by Gesner to Augsburg or by Busbecq to Maximilian, would have had time to grow and increase in Germany and the Low Countries, and might well have attracted the attention of the widely interested and cultivated Sidney.

But how they came and when they came does not greatly matter now. Come they did, both to Holland and to England, and early find their way to favour and to cultivation and variation. The date of the earliest varieties is as unknown as the date of introduction, but some are certainly very old, many late single kinds, Darwin tulips among them, have been found by Dutch growers in old Flemish gardens with long histories, other sorts seem to be quite as old. The tulip, like the dog, appears to have taken very kindly to domestication and variation for the pleasure of man.

There are, of course, wild tulips in some countries, the *Sylvestris* of Italy, for instance, though none are native to Holland. They are accredited to England, and said to be indigenous in Gloucestershire, but the thing is very doubtful,

DARWIN TULIPS

much more likely have they been introduced—as rabbits to Australia—and taken to the West Country. There is a garden in Devonshire where they multiply wonderfully, and where, to a certain extent, a record of their multiplication is kept. Incorporated in the lease of the house is a clause to the effect that the lessee, when he leaves, shall, besides the usual "habitable condition," etc., leave so many hundred of a special kind of red tulip in the garden. The which is rather a pleasing clause to read in these days, when no one may put a window in his woodshed without the permission of the Urban District Council. It is pleasing to realise that a man, though dead, has that much right over his own property, and can perpetuate his fancy for red tulips, or (as is the case of an east county estate) ordain that the garden he loved shall continue to be as it has been since the days of Anne Boleyn — that, not only shall no Council say him nay, but no Englishman would ever wish it, on the contrary they all, privately, think it a very right and proper thing.

Perhaps it will be permitted to close these desultory remarks on tulips past and present, English and Dutch, with a few lines from two

early Victorian poets. The early Victorians loved the tulip, and, as usual when they loved a flower, they enshrined it "in poesy," a rather doubtful compliment :—

> And sure more lovely to behold
> Might nothing meet the wistful eye,
> Than crimson fading into gold
> In streaks of fairest symmetry.

This sounds like the old original *Duc van Tholl*, which is almost ugly enough to deserve such a fate ; at least in some people's opinion, although an old grower, once contemplating it in admiration, exclaimed, "It is a grand flower—grand ! But the English amateurs now have no taste. They no longer know what a tulip should be ! This, this I tell you, this is a Tulip !"

One other quotation, this from Montgomery, admired of our grandmothers. He would seem to have been planting a tulip bulb, evidently one of the streaked florist's variety, and the thought of the flower to come moved him to utterance worthy of the "Elegant Album" :—

> Two shapely leaves will first unfold ;
> Then, on a smooth, elastic stem,
> The verdant bud shall turn to gold,
> And open in a diadem.

Not one of Flora's brilliant race
A form more perfect can display;
Art could not feign more simple grace,
Nor Nature take a line away.

Yet, rich as morn, of many a hue,
When flushing clouds through darkness strike,
The Tulip's petals shine in dew,
All beautiful, but none alike.

CHAPTER VI

BULB BARNS, NAMES, AND GROWERS

THERE is, without doubt, a certain charm in bulb barns; not perhaps quite the charm of an old English barn, wherein there is ever a brown twilight and never a straight line, and it is still possible to think of the Good People coming to shelter on wet nights. Dutch barns, even the least well kept of them, are too orderly for that. They are rather too foursquare and deficient in the unexpected annexes and the mysterious doors leading to nowhere and anywhere which are part of the true fascination of barns. Nevertheless they have attractions; they are warm-coloured, lofty, silent, and full of a pleasant dry smell; they are essentially not people's houses though, especially at some seasons of the year, they are houses of quiet, stored life.

Every grower must have a barn; the big men,

A BULB HOUSE

Mima Nixon. 1908.

of course, more than one, the number and size varying in proportion to the gardens. Those of the little men are sometimes rather makeshift places, wherein, at other times of the year, other things are kept and the true character of a bulb barn somewhat lost. The true character is, pre-eminently, orderliness; seen at perfection a bulb barn is, in its own way, as typically Dutch as a hyacinth, it is the perfection of order and system, and yet somehow cosily human too. Round the sides of the great barns there are shelves with upturned edges; down the centre is a stand, or two stands with an aisle between, if the barn is very large, and these, too, are all shelves or trays, tray upon tray nearly to the roof. Against the walls there are light ladders, easy to move when the upper trays have to be reached. In the corners are heavier and longer ladders leading to the stories above—when there are any, as there often are in the bigger barns. Here the bulbs are brought, sorted according to kind and size and quality; here they accumulate from early June, when the snowdrops and aconites are brought in, on through the summer months till all are harvested and the barns are full, wonderful quiet stores of waiting life.

Many of the bulb barns have windows, herein

also differing from the true English barn, where the primitive fashion of lighting by the open door still maintains, and is all that is necessary. In Holland it is necessary to have at least some barns with windows, and windows that open, for they have to be left open when the tulips are first brought in, so that the bulbs may dry and get ready to be cleaned. The cleaning of all bulbs, which consists in removing the old outer husk and presenting the bulb dry and shining as we see it, is usually done by women in a big barn not far from the grower's office. The work is not hard, though the hours are long, and the wages, seeing that it is unskilled labour, rather low. The principal objection to it is the skin irritation that it causes, though one hopes that those daily employed get hardened to that. One sees quite old women at the work, grandmothers sitting on benches or upturned baskets, their brown wrinkled faces bending over the bulbs, their long gold earrings, possibly the only treasure left of some inherited store, dangling, And beside them young girls, with round rosy cheeks and demure eyes, which do not—at least openly—seek those of the men who pass to and fro carrying the deep baskets full of bulbs. One seldom or never sees any of the typical peasant head-dresses among the women who

work at the bulb-cleaning, presumably the workers are not drawn from the class who still wear them. But one does see a beautiful neatness—a general impression of cleanness, of blue cotton, neat straight hair, and wooden shoes; an appearance a good deal more neat and picturesque than the average of poorer women-workers in England; unless, perhaps, one excepts those who are employed in one branch of pottery-work, where the necessary uniform is print sun-bonnets and overalls. There is no flirting in the barn, practically no intercourse between the men and women, the men simply carry in the basketsful of freshly-lifted bulbs to be cleaned, and carry out those that are done. No doubt when work ceases or dinner-hour comes some young people find each other out. It would be clear waste and much to be regretted if they did not.

The men employed in the bulb gardens work from about six in the morning till seven at night in the summer; in the winter, of course, when the daylight is short and the work less, not so long. The thing which strikes one most about them is how much cleaner they are than any English workers on the land. But it is not fair to ascribe this entirely to native characteristics and ideals;

the soil and conditions of the bulb district are entirely different from those of any agricultural part of England. It has been said of the men employed in the bulb fields that they do not care about flowers, merely regarding them as daily work and having no more æsthetic appreciation of them than of turnips. Of course it may be so, but personally I rather doubt it; although, as has been urged, they certainly do not grow flowers for themselves. In the bulb district, one never sees blooming cottage gardens as in England, but then land there is so valuable that comparatively few people can afford to have gardens at all; and those that do are both so poor and so thrifty that they cannot keep them for pleasure only, but must turn their wee patch to the best food-producing account. In the bulb district there is no waste land; no broad margins—"God's gardens,"—beside the road; no tangle of leeks and roses beside a tumbling-down cottage door; no grass-grown marigold-studded stretch of brickwork surrounding the common pump. There is no waste, no weeds, no margins, and, alas! but little beauty about the dwellings of the work-people. Yet none the less it seems they love flowers, often they are to be seen carrying them home, and seldom one passes houses with no

FLOWER-MARKET, HAARLEM

Mme. Nixon 1906.

vase of them in the window in blooming time. And this, surely, argues a real love of flowers, when one comes to think that they are in themselves neither rare nor valuable here, many of the cut blooms thrown away almost as much as the poppies in our English corn-fields. Of course a certain number of the flowers are sold in Dutch towns—as in the towns of other countries, some few growers even may grow a small quantity for that special purpose. But, again, in the purchasing of them, the charge that the working-classes have no æsthetic love of flowers would seem to be negated, for, though the prices of cut flowers, considering the quantity grown, are relatively high, many of the purchasers are workmen. One sees them on pay-day carrying home their purchases with the same evident care and admiration that one sees similarly bestowed by the better class of English mechanics and workmen, when on Saturdays they carry home the bunches of wallflower and violets that they buy in the streets.

There are in Holland, besides the workmen and the great growers, others concerned in the bulb industry, a whole lot of very small growers, simple folk, who for the most part live in the numerous little villages around Haarlem, Alkmaar, and

Leyden. They own but one field, or perhaps two, and combine with bulb-raising vegetable growing or cow-keeping. They, with their families, do all the cultivation themselves, planting and lifting the bulbs, the old folk or the children cleaning them, working in the patriarchal co-operative way. These men may be seen in Haarlem on Mondays in the bulb season (August to October); they come to offer their bulbs to the exporters, who cannot for themselves grow enough of some of the sorts in most demand, or who do not find it worth their while to give up their land to producing the cheaper varieties. Later on the bulbs themselves will come to Haarlem, by canal boat—if the canal is handy, or perhaps on the back of the man who raised them, or perhaps brought by the good-wife, who may come barefoot along the sandy road, only donning her shoes on the outskirts of the town. The authorities of Haarlem will have no bare feet in their streets, their sense of delicacy forbids; even the fishwives of Zandvoort, who walk better than almost any other western women, have to put on the wooden shoes they carry, in addition to their burden of fish, when they have crossed the sand dunes and near the city.

But, of course, not all the less-important growers

are in such a small way; some of them are substantial well-to-do men cultivating quite a considerable quantity of land. Certain of them grow almost exclusively for one or another special exporter, so that they seem to the uninitiated to be his men, though in reality they are not at all. It is these men who may sometimes be seen during the bulb season in the exporter's office, or sitting with him in the veranda of his house, talking of the weather and the condition of trade over a glass of schiedam and a Dutch cigar, in the old-fashioned leisurely way that still maintains in parts of Holland. Cheery, comfortable folk these, speaking neither English, French, nor German; Dutch of the Dutch, and not easily to be known by the foreigner.

In the ordinary bulb barns there are two things to be guarded against, mice and fire. Against the latter there is insurance, and one would think there should not be much danger of it in those barns where there is a rule forbidding the workmen to smoke while within. There are some barns, however, where there is no such rule; where the master feels that justice demands he should allow his men the liberty which he, with the true Dutch love of tobacco, cannot do without himself. There is one

dear old man who usually smokes at meals and very often in bed, to the danger of his bed-curtains; I do not think that he, even if cruel fate compelled him to refrain himself, could find it in his heart to forbid his workmen the well-loved pipe; certainly they all smoke everywhere in his barns, but, so far as I have heard, he has never suffered loss by fire.

Mice can give much trouble to bulb growers; they are very partial to some kinds of bulbs; they eat them in the ground unless they are driven out by deep digging and laying the earth open to the frost beforehand. In the barns they naturally assume that the grower has kindly put up a good store for them. But by traps and cats and poison and wonderful Dutch orderliness they are kept under. In a bulb barn at night one hears few of the mysterious rustlings and patterings that make an English barn suggestive of hid but active life.

There is one other thing to be guarded against in some few barns, that is frost. Not in the generality, of course, the ones where are accumulated the ordinary bulbs of the trade; but in the ones where there are stored things for spring planting, such as gladioli, begonias, hemerocallis, dahlias, and other and choicer bulbs and tubers,

HYACINTH FLOWERS GOING TO MARKET

Mima Nixon 1922

the frost is a very important consideration. Some barns are very carefully protected against frost; some I know are carefully and systematically warmed during the winter months, and never, winter and summer, is the range of buildings empty. Standing in one of these, a curious thought comes; one realises, as one looks at the crowded shelves and remembers those of other barns beyond, that, could some cataclysm destroy the ornamental flora of the world, but leave untouched this range of barns with their contents (as Noah's ark in the Deluge), there would still be a good start for repeopling the world with flowers. Representatives from all quarters of the globe are to be found in those barns, bulbs proper, and corms, and tubers, and all the variously named houses of stored plant life. Besides the hyacinth and tulip of historic fame, and the humbler crocus and snowdrop, there are calochortus of California, tigridias of Mexico, begonias of Jamaica, tuberoses of Persia, gloxinias and achimenes, cannas and crinums, amaryllis and arums—flowers native to all parts of the world, brought in the first instance by indefatigable collectors, who often have faced real enough perils in their work—the cold in Siberia, the heat in Africa, hunger and thirst, the ever prob-

able risk of robbery and violence of the Kurds in Central Asia, the happy hunting-ground *par excellence* of collectors. No romance in the bulb industry now? Why, it is full of romance! And not the smallest of it, at least in the eyes of some, is the patient work, the ceaseless, never-beaten perseverance and experiment by which the adventurously brought plants are acclimatised to the chilly western countries, and cultivated and varied to the manifold forms in which we find them now grown in garden and green-house, and catalogued under various names.

The names are something of a trouble to growers, at least some that I know. "Why," asked one who, be it remembered, regarded his work with seriousness and veneration, "Why will your English people call the flowers by such foolish names? For an instance, 'Torch Lilies!' Where is the torch? Where the lily? It is no lily, see the root, see the flower. And for torch, or for 'flame flower,' as you sometimes also call it, there is no resemblance; there is even none of the waywardness, the unsteadiness or quivering of flames; these things, I grant you, are in some flowers, as the pampas grass, but not in this, it is a stiff, a formal flower. Yes, more like to a red-

hot poker, as also you call it. If you must have some other name than Kniphofia (though I do not myself perceive that it is necessary or the one easier than the other), if you must, I say, well then, it is perhaps best you have 'red-hot poker,' it is at worst but childish and shows no mistake in classification. But you would far sooner have it a lily, I know; all things must be called 'lily' now, I cannot tell why—Gladiolus, 'the Sword Lily,' Vallota, 'the Scarborough Lily,'—the *Scarborough Lily*! One can almost as well have called it the Margate Potato!

"It is the one thing I have against the English amateurs—not all, of course, but many—they will not call a plant by its name, they will have what they call a 'simple' or perhaps 'old-fashioned' name. But it is ridiculous. If a flower has long had a simple name, as the primrose, the foxglove, well and good; if it has had it in the common language so long or longer than it has another of the botanists, why then one has no quarrel with a man for using it. But if it is a flower of late days, and there has come to it first the name of the botanist—the man who makes it some other 'simple' name, which is also quite erroneous, and seems to class it as lily or as some other when it

is almost as soon a cabbage—is nothing less than a child. Nevertheless for these we must disfigure our catalogue with such names as Torch Lilies and the like."

And certainly he and other growers do so "disfigure" their catalogues, for a grower is a man of business. A rather curious mixture of the commercial and the connoisseur; a practical man of business and a gardener, but, above all things, one who loves his work. With the Dutch grower, at least those of the older school, and I think the modern too, work stands first. There is no hastening through with it, so as to devote time and energies to sports and hobbies; sport does not play a large part in the Dutch grower's life, and other hobbies are made tributary to the one great interest. There was one old man who was at heart an artist, in his far-off youth it is possible he cherished dreams; but when necessity and circumstance made him a grower he put the dreams away, though he kept his paint-box. On a Saturday sometimes, locked safely in his office, he still took out the little box of somewhat dried paints; he could no longer draw, his hands, steady enough for any delicate operations of his work, had long lost their skill. But still he sometimes

A BULB-GROWER'S GARDEN

carefully coloured the illustrations in his catalogues, the real flower standing in a glass before him, and the names of the paints he employed set down, so that he might more fitly describe the true colours of the flower in the next catalogue compiled. They were not always beautiful results he produced, but there was something quaintly beautiful and withal pathetic about them and him.

Other growers there are whose tastes are scientific, or perhaps for photography or the microscope. These, too, are turned to account; exquisite photographs of flowers illustrate the bulb lists; patient examination of pollen and plant parasites, careful and systematic experiments with soils and fertilisers, give help and enlightenment in the growing and varying of the bulbs. Others there may be who have had some thought of another profession before family circumstances gave them to this life, but they are not the worse growers on that account. They would not enlarge leisure to practise arms if their tastes were military, or to read theology if their leaning was towards the ministry; but they would be content to do their duty truly and honestly, serve God and love their neighbour, and give to the work they had undertaken the whole of themselves.

This, then, above all things strikes one, a grower is a man steeped in his work; he lives in the midst of it, he rises with it, and goes to bed with it. On his few holidays he goes to see the achievements of others in it, or, better still, the working of nature. He goes to see other things too, no doubt, he has other interests—pictures, or music, or literature, or languages—he is no narrow uncultivated man; but his work stands first, a long, long way first, he and it are curiously and indissolubly one. So for this reason I say at the last, as I said at the first, those who would see and know the bulb gardens of Holland should also know the men who for generations have grown the bulbs, and loved and understood them.

APPENDICES

. . . dans leur sympathie, ils m'ont dû garder place,
Car ils ne savent pas donner à moitié,
On conserve longtemps un beau fruit dans la glace,
Les gens de climat froid sont de chaude amitié.

Et puisque vous avez cette aimable pensée
De vouloir que mes vers vous présentent là-bas,
Dites bien tout d'abord à la foule empressée
Que mon cœur se souvient des nobles Pays-Bas,

Du pays généreux qui ne sait pas proscrire,
Qui s'ouvre à tout martyr, à tout persécuté
Où chaque citoyen dès l'enfance respire
Avec le vent marin, l'air de la liberté.

Enfin de ce pays que l'art et la pensée
Plus que tous ses trésors, rendent illustre et grand,
Et que vous voit passer dans sa gloire passée
Esprit de Spinoza, palette de Rembrandt !

François Coppée.

I

HYACINTH CULTURE AT HAARLEM IN THE EIGHTEENTH CENTURY

Chapter I.—Introduction

Saint-Simon, writing in the year 1768, declares there were at that time in Haarlem nearly two thousand named varieties of the hyacinth, and we may suppose they had already been about forty years in cultivation on a soil which seemed particularly adapted for the purpose,—a fine upper stratum of grey sand, superposed by the action of the sea on a thin subsoil of peat, so that Nature prepared, it seems, many thousand years in advance to produce the delicately-tinted and exquisitely-scented flower, which rises as if by magic out of the cold earth in a few weeks' space.

One well-named variety, "Sceptre of David," reminds one of the long moral preparation of one people chosen out of the nations of the earth (a stiff soil to work), before the long-desired of the hills should come, when there should come a rod out of the root of Jesse, and a flower should rise up out of his root.

If there are "correspondences" in the material and spiritual worlds, the flower that cometh up in a day has its root in the ages.

The hyacinth is one of the most perfect results of man's

Art—Art, for Saint-Simon is persuaded that the hyacinth has become what it is principally through cultivation, and without human patience and perseverance—if nature had been left entirely alone—a much less pleasing and exquisite flower would have appeared.

Every year new varieties are developed, and hope springs eternal in the breast of the cultivator. Haarlem, the Paradise of Flowers, may be especially described as the home of the hyacinth.

Upon his arrival at Haarlem, the stranger is so dazzled with the spectacle of the wonderful and brilliantly coloured carpet spread before his eyes, that he does not at first realise there is yet further joy to be found in the singular beauty of certain species and varieties taken individually.

There he sees acres of hyacinths, double and single, in uninterrupted ranges of pure colour; the only intervals between the rows being the little grey sand paths, to enable the cultivator to reach the flowers.

It is difficult for the imagination to picture a piece of earth so brilliantly enamelled with flowers, and yet such variety and beauty in detail. The rarest and finest specimens are put apart from the rest in chosen spots, and these again are arranged in symmetrical order, with such taste and so unsullied and trim, that one can hardly believe Nature has been allowed any hand at all in the arrangement. The florist's art seems to have triumphed almost too completely. Well, one may say the florists of Haarlem have played the predominant part, and their long experience, aided by the succours of reason, have shown them how to assist Nature by seconding her efforts, and thus to raise her to a stage beyond herself. In any case, the flowers they cultivate seldom reach such a high state of development elsewhere. However active and industrious they may be, no amateur, with all his talents, has ever reached to

such surprising perfection—in strength and form of stem and blossoms; or to such brilliancy of colouring, though many possessing both talent and experience have spared neither trouble nor expense in their endeavours to produce the same result. They are inclined to attribute their want of success to the nature of their climate and the soil, and like to regard Haarlem as a place especially privileged in these respects.

If amateurs had any idea of the spirit of emulation rife among the Haarlem growers, and the way their whole attention is absorbed,—how unceasingly they labour and continually verify their experiments, always reflecting and improving upon them and making fresh combinations,—they would then know the work is not impossible, and they need only be endowed with the indomitable qualities of the Dutchman, and they might produce the same results.

There is no doubt that there exists, even in Haarlem, a sensible difference between growers of the first class and the more second-rate cultivators; for, although all are imbued more or less with the same spirit, and enjoy the same advantages of soil, climate, etc., yet some, through learning and experience, rise superior to the rest in this line.

If in other countries amateur growers kept more in touch with one another, and co-operated as do the Haarlem cultivators, there would be less occasion for despair. For a good deal of their success comes from their united efforts and experiments, so that among them all they have many ways of knowing how to preserve bulbs, to propagate them, and guard them from destructive accidents.

Nobody knows exactly where hyacinths come from originally—the name of the hyacinth called "Orientalis," whose origin can be traced back till it is lost in the obscurity of ages—seems to imply that this flower originated in the East, and there has been much discussion about the fact

that Moses in the book of Exodus speaks of the colour of the hyacinth—but whether he refers to it only as a colour, or as a flower, or as a precious stone, it is impossible to say—for it has been differently translated in various languages. Saint-Simon tells us that Dioscorides, in the time of Vespasian, describes a flower he calls "Hyacinthos" in these words: "L'Hyacinthe a les feuilles des plantes bulbeuses et la tige dodrantale (c'est-à-dire de trois paulmes, pans ou empans de haut, on n'est pas d'accord sur cette mesure non plus), faible, et plus mince que le petit doigt, de couleur verte, dont le haut s'incline sous le poids d'une tête chargée de fleurs purpurescentes." People have argued indefinitely on the precise shade of "purple," and to this day they have not decided if it should be more red than blue or more blue than red. The general opinion seems to be that the original hyacinth was the colour of the natural wild hyacinth (which is a Scilla?) which grows in the woods, where the red variety is not nearly as commonly found as the blue.

On the other hand, the first species may have been red, for in old fables it seems the hyacinth was thought to be red. Ovid relates how a flower sprang from the blood of the young Hyacinthus,[1] whom Apollo slew by accident with a quoit. Others, like Pliny and Pausanias, say the blood of Ajax, slain near Salamis, was changed into this flower.

Whatever its original colour, and whatever country it came from, it is certain that many species have been produced by the florists of Haarlem, and have entirely originated in their gardens. Yet it is to be remembered that all came from the old original stock, however different they have now become. Their natural simplicity has been lost to a certain extent.

Florists divide hyacinths into four classes:

[1]Unless blue blood was spilt.

1. *The Single Hyacinth*—the corolla divided into six segments.
2. *Semi-Double*—only slightly double, with a few petals irregularly disposed behind the single.
3. *Double*—the outer petals lined with an equal number of other petals in regular order.
4. *Full Hyacinth*—which has a heart as full of petals as it can hold.

These four classes furnish a great number of varieties. We cannot define further without going into their distinguishing features and numerous subdivisions.

The Full Hyacinth possesses the greater number and best varieties. It is important a hyacinth should belong to the best (one of full) varieties—but this is not sufficient to constitute a good flower. The petals should grow in very regular order—especially those within the heart of the flower, and the petals should as well be curved back very evenly at their tip. They should also be of a beautiful clear and decided colour, and this is a great charm in a hyacinth. As well as being as perfect and decided as possible, the colour of the inner should harmonise agreeably with the colour of the outer petals.

In this respect there is nothing to be found to surpass the Gloria Florum Suprema[1]—the blossoms being perfectly disposed the full length of the stem, which rises tall and very straight, but is, unfortunately a little too thin to support the weight of the flowers. The petals are very pure white, and their tips fold back with the greatest regularity, forming a perfectly symmetrical bud (or button). Colours such as blue and black, red and white are satisfactory combinations. White hyacinths, as a rule, are the most delicately shaded, but each variety has a beauty entirely its own.

Of every colour there are kinds which obtain high prices, but the beauty or merit of a flower is not exactly determined

[1] No longer in existence.

by the monetary value—for people pay for novelty; the rarity it is which enhances the value. However, they must, besides, have other essential qualities. Gloria Mundi and François Ist, and other blues, which used to be the only ones which could at all compete with Gloria Florum Suprema, have at last found their rival among the white varieties. "Og Roi de Basan," "Le Comte de Provence," etc., lose nothing by comparison. Some of the reds, Rex Rubrorum and Mine d'Or have as many points in their favour. There are now hyacinths of almost every shade. But only at Haarlem are thousands of varieties and shades to be seen together, and there one can feast one's eyes to one's heart's content. When a new kind is raised from seed it causes a great sensation.

Saint-Simon, after expatiating at length on the endurance of the hyacinth through centuries of growth, ever reproducing itself with renewed vigour,—showing no sign of exhausting the stock, says: "Cependant cet oignon si merveilleux, éternel, pour ainsi dire, dans l'imagination et présent aux yeux pendant tant de siècles, ne dure effectivement que quatre à cinq ans."

The hyacinth is propagated by its offshoots or young bulbs. It also reproduces itself from seed. From the seed new varieties are produced. Hyacinth bulbs will bloom in any direction they are placed, even upside down—the flower will grow downwards in a vase of water.

If you take the bulb at the moment of planting, that is, when it is beginning to show the tender green point of its shoot, the first thing to do is to examine if it is healthy. It should be round and full, and not shrivelled; though each variety differs slightly in form, yet all should be properly rounded in appearance, because this shows the bulb is in good condition, nor should it be too light in weight for its size. If it is, it shows it is drying up inside and is deficient

in sap. But to be small in size does not matter, for some of the beautiful red varieties have very small bulbs, and very often single hyacinths have larger bulbs than the double.

There is a kind of double hyacinth, white with a red heart, which is known by its outer tunic, which is always wrinkled and defective. In spite of its appearance, by its weight and form one may judge if it is in good condition. The roots often grow like a crown round the base of the bulb, and the space in the centre is called the "eye" of the roots. This space is covered with a membrane; and in choosing bulbs, this is the part you must first examine carefully to see if there are any signs of decay. There should be no marks of damp or of mildew in the eye at the base of the bulb.

When the time draws near for planting, the bulb should show little swollen white points at the base where the roots are to come.

The tunics or suberous leaves (what is called skin on an ordinary onion) are always covered over with a thin, dry, reddish skin, which falls off after a time, but is at first useful in protecting the other tunics when the bulb is in the earth, for it is planted in the dampest season of the year. No tunic entirely embraces the circumference of the bulb, but only about two-thirds of it. The tunics are really an extension (in the bulb) of the long green leaves, only the part of these leaves which show green above ground fall off in the end of the year, and the base of them, which remain within the bulb as tunics, spread and increase till, when they are pushed by each year's growth from the centre to the outside of the bulb (by the growth of new stem and leaves within), they get weaker and thinner, until at last they turn into the dry, red, outside skin, which finally decays and falls off.

The tunics are of the same substance as the rest of the bulb (which is composed of fleshy scales), and the difference

is so gradual that it is impossible to see where the fleshy substance of the bulb begins to change into the suberous quality of the leaves, and yet there is a very marked difference between the bulb and its leafy scales; they are, however, an undetachable whole, and you cannot pull off the inner tunic leaves of the hyacinth from the base, as you can pull off the leaves of an artichoke.

As soon as the bulb is taken from the ground it begins to grow and increases rapidly during the three months it lies on the shelf, and all this time it lives on the sap-nourishment accumulated by it when in the earth. The sap concentrated in the bulb can preserve it for a great length of time, but it is not quite sufficient to enable the bulb to finish all the work it has to do, and if it flowers it will not have strength enough to bring its seeds to maturity. (Saint-Simon here observes that this is not attributable to the bulb having no roots, but to its inward indisposition.)

Some people imagine that a bulb which has been kept from flowering can reserve itself for the following year. Many such experiments have been made, and bulbs have been kept back on the shelves and have not been allowed to flower; they have invariably perished, and, growers say, scarcely a year passes that they have not tried the experiment,—they have lost every bulb which was not put into the ground. As a rule the sap in a bulb will be sufficient nourishment during its ordinary growth till January or February, but after that it will begin to grow mouldy and go bad. The moment it is put in earth or over water, in the proper season, the bulb, which is just beginning to be exhausted, pumps up sap so vigorously that it begins at once to throw out roots from almost the first day, and growers dare not move them again, even a few hours after they have been put in, to send them away, however carefully packed, even a short distance, for fear the fresh moisture they have

"WHEN SPRING UNLOCKS THE FLOWERS TO PAINT
THE LAUGHING SOIL"

sucked up so quickly should cause them to rot, and they even consider it a dangerous process to change them from one place to another, in the same bed, if they have been but half an hour in the ground. The roots, which are in such a hurry to show themselves when first the bulbs are planted, perish as quickly as they grow. They stop growing before the flower is in full bloom, and are always quite dried up before the seed begins to ripen. While the root is perishing the flower continues, the stem grows, and all the flowers expand completely. When the flower is quite over and the seed is left to ripen, the sap goes into the leaves, which lengthen considerably, then these die in their turn, till they separate from the bulb of themselves.

Chapter II.—Bulbs

It has already been shown what sort of appearance the *outer tunics* present, and it has been explained how the tunics in general are formed. We are now going to push our examination further. After divesting the bulb of seven or eight tunics (or fans), one comes (*A*) upon a little thin flattened thread of crimson colour, like a line. It is, as it were, embedded in one of the tunics; it starts from the base of the bulb and rises to the extreme top.

Continuing to take away again the same number of tunics, one comes upon a second thread (*B*) like the first, *A*, only that it is less red and thicker; then, for the third time, taking off another seven or eight tunics, one meets with a third line or fillet (*C*), very like the two first, with this difference, it is quite white and much thicker. Under the last fillet are the new leaves (or fans), beginning to bud, about seven or eight in number, and in the centre of them is the stem, which is going to flower in a few months.

Now all the tunics are supposed to be taken off, and only the three fillets or threads which we spoke of are left (*A*, *B*, *C*). Fillet *A* is all that is left (within the bulb) of the stem which flowered eighteen months ago.

Fillet *C* is the remains of the stem of the last flower borne by the bulb, six months before.

Fillet *D* is the stem which is about to flower in six months' time (the flower buds are already sufficiently formed to be seen), and *E* contains the stem and tunic leaves, which are to come into bud in another eighteen months.

If, when the bulb is in full flower, you divest it of all its tunics, till you come to the flower stem,—you will find at the base of it a very tiny bud; if you take away the stem, which easily breaks off, you will find the bud remains firmly attached to the base of the bulb. If you open the bud with a penknife, you will see it is composed of six or seven little leaves (or fans), and inside a tiny stem, furnished with buds, which has begun to grow already, and from the moment the bulb is laid on the shelves it increases till the time comes for putting it again in the earth. We have been speaking all this time of the double hyacinth. The single hyacinth is somewhat differently constructed, for it usually throws out several shoots from the sides as well as from the centre. The single bulb does not appear to last so long, for its fillets are fewer, but the number of flowering stems it produces, and the irregularity of their growth, makes it difficult to follow it in its various stages of development as exactly as one can the double. By dint of observing, year after year, bulbs, both those in a good state of preservation and some partially decomposed, it has been discovered that the bulb always loses the same number of outer tunics as it gains interiorly new ones. When once a bulb has acquired the regulation number of tunics, it will always keep to the same number year by year, and nevertheless every year it is

putting forth seven or eight from its centre. The outer tunics, which we call "red skin," regularly shrivel and decay in the earth, and thus they disappear.

The central (fans) or young tunics, when they turn into leaves, do the work of an air-pump; they are the lungs by which the plant lives; they dilate in heat and contract in cold. When dilated they take in the air, with all with which it is impregnated, and they give it out again with the regularity that an animal breathes through its lungs.

Plants do not like the shade of trees; they need open air and sunshine, and they like places where they catch the dew and rain and mist; the moisture thus obtained through their leaves is better for them than water poured upon them from a watering-pot.

Planted in hot-houses or under glass they do without much water, because the hot air produces vapour by the sun's rays from above or from the fire beneath, and it is necessary to introduce a little air in order to let it evaporate (but the plants must not be chilled by cold seizing them in the process). Hyacinths which are protected by planks sometimes do better than those under glass.

The planks are lifted and the plants find themselves exposed to the open air, this is only done when the air is not likely to injure them. To be kept constantly under glass or in a room sometimes affects their colour and shape. It also spoils their colour to be exposed to heavy rain or a very hot sun, which exhausts them. The leaves (as the leaves of a tree) turn on their pedicels one side to the earth, for one surface of the leaf sucks in moisture and the other gives it out. What they receive through the upper surface by day they give out through their under surface at night by a process of evaporation.

When the bulbs are planted the leaves (or fans) are already pushing forth a green shoot. The gardener does

not feel particularly uneasy if the frost touches the tip of the shoot, but they are very much afraid of (the frost) its reaching the flower-buds within the shoot, for if their tops are nipped by the frost, the hyacinths will be disfigured. If any one or two of the leaf sheaths get yellow or diseased they can be cut away without injuring the bud, and neither will the bulb itself suffer, as in any case the leaves drop off in the end of the year.

It is evident now that Nature works in the bulb from the interior to the exterior, and this principle must be well borne in mind by the cultivator.

Chapter III.—Young Bulbs

Having thoroughly examined roots, leaves, and tunics, we now come to the organs of reproduction, and as the young bulbs form them themselves very oddly and irregularly at the base of the old bulb, it is very difficult even for a connoisseur to judge whether any little bulbs are coming, and still less can he foretell how many he may hope for. Sometimes they are numerous, and on single hyacinths twenty-four have been known to develop on one bulb, but on single hyacinths they develop very irregularly, while on the double they are more regular in their growth; growing from the centre; though, as the central stem with all its leaves grows, the new little bulbs are pushed more and more to the sides—sometimes they push through to the outside of the bulb, sometimes between the tunics, wherever they can get air.

Each baby bulb contains the same number of (fans) leaves as the parent shoot, and develops in the same way—only that the first flower of the new bulb is very thin and small. The tunics partake of the same bulbous substance which forms the base of the bulb until it grows to the height (or point)

when it begins to take the suberous quality which distinguishes the leaves from the bulb substance, and so the tunics, as far upwards as they partake of the bulb substance, possess the same capacity of producing young bulbs, which grow from them in the same manner as from the base.

Some gardeners, in order to multiply their bulbs more rapidly, perform the following operation: with the point of a penknife they cut into the base of the bulb (the point turned upwards and inwards), turning the knife round inside the bulb, the base is cut out (with crown and centre) in the shape of a cone—the upper portion forming a concave, exactly fitting the convex of the base (which is the interior which has been separated by the knife).

The separated base forms no stem the first year, and the inner tunic leaves (fans) are little and poor, and seem hardly to have strength to grow, but they form themselves into tunics quite well, and are grown enough by the following year to cover the stem, which, however, is not quite developed as it should be till the third year—then it is as good as any other of its species. The inferior or lower part scarcely ever produces young bulbs after it is cut from the rest.

The two parts of the bulb should be carefully put into very dry sand, covering them about two inches—they must be left some little while exposed to the sun, which would burn them if not well covered with sand: they must then be put in a window or in some place where they are well preserved from damp; they are thus left for four or five weeks—the superior part turned top upwards—the under part anyhow, it is a matter of indifference how it is placed. In four or five weeks' time the upper portion has developed such a number of young bulbs that they are injuring one another.

The baby bulbs are by this time perfectly formed, and one can count their leaves or tunic leaves (fans), six or more, and each possesses its stem.

The upper part (of the bulb operated upon), consisting of tunics without base or crown, which is thus able to produce so many young bulbs, can also manage to nourish them during their early growth (though without roots).

This operation will sometimes save a bulb when it is beginning to decay at the base, and it will thus produce bulbs when the decayed part has been cut away. The bulb called "l'Eveque" has a way of bringing forth young bulbs like buds at the base of the flower-stalk—one or two young bulbs will be found adhering to it an inch or so above ground. These little bulbs are as well formed as if they had come from the base and had been nurtured in the earth. Perfect bulbs can be raised from them by cutting the stem an inch above and an inch below the part to which the young bulbs are attached; they are then put by in earth, and treated in the same way as those which had the *conic operation* performed on them; and just as those were grown and nurtured, simply fed by the tunics—so these obtain their sap for the first year entirely at the expense of the stem, and without starting any roots on their own account. Never more than two bulbs grow thus upon a stem, while very often nearly thirty appear on the upper part of the bulb, which has been separated from the lower part (cone shape). The bulbs grown on the stem take a longer time in coming to perfection than those that start from the base, as a rule in their first year they seem to reach to the same stage as a three-year-old bulb which has been raised from seed—and follow the same gradual course of development, not producing a perfect stem in the beginning.

It is a well-known method with gardeners to *cut* their bulbs in order to give air and outlet to the young bulbs that are coming. They are simply sliced across (not very deeply) underneath, at their base; sometimes they are slit crosswise, good care being taken the knife does not cut into

the growing flower stem in the centre (the centre of the cross-cuts meeting a little to one side to avoid the central stem). By this means this year's shoot is preserved, and when the bulb bursts asunder (along the lines cut for it, through the strength of the young bulb-shoots pushing their way through) a principal bulb forms itself in the centre, which by the second year is as perfect as any.

There is no part of a bulb which can be pointed out as exclusively serving for the production of young bulbs. They come sometimes from the centre, sometimes from the stem—bursting open the bulb and becoming so like it in form that gardeners have some difficulty in distinguishing the parent bulb from the new. It seems inconceivable that Nature should put such strength into such a delicate production as the young bulb; when once it finds space to develop itself there is no part of the old bulb it will not force to let it through. The angular form of the young bulb comes from the kind of resistance it meets and moulded by the space in which it is free to expand. If it grows on the outside of the bulb, it is concave on the side which joins the round side of the bulb, while on its outer side it is round.

After the first year the young bulb becomes its normal shape, like those which are raised from seed. It is difficult to ascertain if a bulb is going to produce young ones or not,—it is easy to be mistaken, though the conic operation will show clearly in a few weeks if young bulbs are going to develop. It seems scarcely possible that those which develop more naturally can force their way through the tunics without aid, and do their work in the space of one year.

It has been found that when young bulbs have not strength sufficient in their first year to burst the tunics, their development is much assisted by the bulb being cut. The

different experiments which have been made prove convincingly that a bulb can bear many amputations safely, and if at any time a sickly bulb has to be cut, one may be pretty certain to get young bulbs from it by taking care *to keep the wound made by the cut quite dry.*

There are some bulbs, such as François Ist, which may exist years without producing a single young bulb, while others produce at so great a rate that one only wishes they would stop. This shows that young bulbs are plentiful, and may grow in all parts of a bulb,—only that in some they find more resistance than in others,—and the difficulty they find in working their way through the harder sorts causes the slight difference in the forms of the bulbs in the different species. Though all look very much alike to the casual observer, there are nevertheless differences between them. There are some famous growers, such as George Voorhelm, who seldom makes a mistake though he owns 1200 sorts. Each sort has its own regular and distinctive method of reproduction, and peculiarities which mark one species never become accidental in another; each kind keeps to its own manners and customs.

Nature being ever obedient to laws, certain knowledge of her ways is the more easy to acquire—the law of species will be the same in a thousand years as it is to-day. Culture has certainly improved species, and finished what Nature could not by herself complete. Some accidents have become thus a second nature, remaining permanent if another accident does not again occur to disturb the existing order.

Chapter IV.—Seeds

Although there is a way of propagating hyacinths by seed, like other plants, yet it should be known to all that it is seldom that a double hyacinth produces seed, and such a

thing has not been known as a seed (from either double or single hyacinth) ever producing a species at all resembling the hyacinth from which the seed is taken. "La Perruque quarrée," a red hyacinth, has produced "La Comète"—a very fine sort, and a splendid red, but it has no resemblance to "La Perruque quarrée," and yet they are about the nearest in likeness that have been produced. There is no visible difference between the seeds of double and single hyacinths. Gardeners are more hopeful of raising double flowers from the seeds of single hyacinths than of raising double from the seeds of double. They have not yet found any principle to go upon in the choice of seeds, however many experiments have been made. Some have thought a well-formed hyacinth in its seventh year, being then in its prime, is more likely to produce double flowers from its seed than it would be if ten or fifteen years older. It is supposed that the seed of a full hyacinth, which has its petals redoubled to the centre of the flower, possesses an advantage over others, or double may be raised from its seed, but it very rarely produces seed at all; when it does, success is still very uncertain. Some like to try semi-double; some follow one method, some another, few obtain the same result twice over. Some amateurs, once upon a time, longing to obtain a new sort of flower, sowed the seeds of a single yellow hyacinth, very pale in colour, and of quite a small and common sort; they were lucky enough to obtain splendid flowers of a very good white, the centre a perfect yellow, stems and blossoms all superb,—"Saturne," "Heroine," "Flavo Superbe." "Og Roi de Basan" also derives its origin from the stock raised from this seed.

Countless experiments have been made, and all tend to show that flowers produced from seed never resemble the flower from which the seed was taken. As a rule they differ in every point, shape, colour, and height. Nature

insists so much on variety that even seeds taken from the same seed-vessel do not produce flowers alike. Some may be red, others blue or white, large or small, as the case may be, sometimes they are fortunate enough to get several double varieties from the seed of the single hyacinth. It must be confessed, added to other difficulties there is this: it is four years before the seed produces its flower—that is, in an ordinary way, for sometimes it is more advanced by one or two years. As during the course of four years the bulbs are taken up three times out of the ground, it may sometimes happen that the experiment has failed through negligence, but there has never been any doubt at all about the fact of a seed never producing the same kind of hyacinth as the parent stock.

One should not cut the hyacinth stalk, or separate it from the bulb, if seeds are to be taken from it, until the ovaries are yellow and beginning to open and show their seeds, which should be already black. Then they can be cut and put in a place where they are protected from sun and rain, and when the ovaries are quite dry the seed can be taken from them and very carefully kept (not wrapped up or covered) until the time for sowing them, about the middle of October. Growers who have no interest in preserving the seed believe it is a bad thing to exhaust their bulbs by leaving the seed to ripen on the plant. The earth that the seeds are thrown upon should be well prepared (I shall describe its composition presently).

The seed is visible enough to be spread about without the necessity of mixing it with sand, as is sometimes done with vegetable garden seeds. They must not be sown too thick, and about an inch deep. When it is beginning to turn cold they must be protected from the frost by a covering of manure, leaves, or tan. The seed, which begins soon to germinate, is very sensitive to heat and cold. The parts of

the seed are not unlike a fruit. It is first covered by a strong black skin, and under this a fleshy substance. This contains an almond, within which is enclosed the germ; this develops in the same manner as in the seeds of all plants that are called by botanists "one lobed" or "monocotyledon." During growth this almond part of the seed detaches itself from its wraps.

When the grain is put into the ground in the month of October it swells, and the germ, piercing through the *pericarp* or fleshy part of the seed, begins to develop itself. The little leafy shoot which pushes upward is the part that botanists call the *plumule*, and the part which pushes from the central axis (or plantule) is called the radicle or little root. During the first year the little root is always tuberous or knotted. It does not yet draw sap from the earth. It is generally agreed among botanists that the plumule and radicle (the plant and little root) at this stage draw their nourishment from the cotyledon or seed-lobe, to which they are still joined. This lobe goes on nourishing the plant till the bulb has already taken form, and takes in nourishment from the earth (through its base).

The thin round leaf-shoot which comes up remains *bent* a whole year before it has gained sufficient strength to rise straight. The first year the root is only a thin thread; sometimes it grows very long and is full of knots, then it is organically diseased, and the bulb will be very weak and worthless. They often die when the root is thus deformed. To make a well-formed bulb the root should have only one knot at the place where it comes from the seed; upon this the bulb forms itself. At first it is composed of a single tunic, and this tunic is joined and completely closed on all sides.

At the end of one year (after sowing the seed), if the bulb were taken up, one would find this tunic lined with two other tunics exactly like it.

The bulbs being still very small, they exhaust the soil very little, so that the first year growers do not take the trouble to take them up. But an amateur, who raised a great many from seed, used to say he thought taking them up every year certainly assisted their growth.

After it has been eighteen months in the ground the bulb has gained a certain consistency; it is now composed of four tunics, each of which encloses it entirely, the outside tunic appearing brown and dry (as if the drying process had begun, for this outer one has to shrivel away in the earth next year). The leaf-shoot still looks thin and round like a rush, but it holds itself straight, and has gathered strength since last year. The second year (about the time it has to be taken up) it has lost its outside tunic, but has still three left, completely surrounding it, but within the inmost envelope the base of the leaf-shoot or fan (which now shows a double shoot) is already spreading and forming in the centre of the bulb a tunic, like the tunics of the proper (grown) bulb; that is to say, it wraps it only two-thirds of the way round its circumference. The roots have now strengthened. The following year they are yet stronger. The bulb casts off all its binders, the early tunics which enveloped it completely (like a bandage). After this it enters into its mature state, the leaves, instead of clinging together like a round rush, separate, slowly detaching themselves and taking the shape they are to preserve to the end, though every year they increase considerably.

From the time the bulb loses its first closed tunics it is able to produce its flower, which it never can do while it remains with closed tunics. The first flower has a long feeble stem, which bears one, two, or three small blossoms, but these are enough to show the sort of flower it is going to be. If it is single it will remain a single always, neither will its colour vary again, and it can be classed among the

red, blue, or white of its kind, but it will grow more perfect and improve in height, size, and colour. If the flower turns out to be double, the growers are delighted, and then they will spare no pains in developing its beauty, for they know not what degree of perfection it may yet attain.

When the bulb is *three years old* (having a treble shoot, and having lost its last completely enveloping tunic) it possesses only the ordinary tunics, which are formed by the expansion at the base of the leaves (these envelop only two-thirds of the bulb).

The bulb, when *four years old* (having developed more perfect leaves and begun to produce flowers), is composed of about twenty tunics.

If the flower, during the *fifth year*, continues to develop and shows to advantage in colour, form, etc., the growers' hopes rise higher still, but they cannot tell even yet if the flower will fulfil its great promise.

A bulb which has grown too rapidly will sometimes throw out young bulbs (or offshoots) at four or five years old, but never before it has *once*, during the course of its life, put forth a flower. This fact is important to remember in regard to observations to be made later on, on the subject of vegetation.

In the ordinary course of nature the bulb does not arrive at its final state of perfection until its seventh year. The grower delights to note its yearly growth in grace and beauty, till at length it becomes *précieuse*, then he is fully repaid his care, and the kind is for ever fixed, and will never vary again, and it will produce young bulbs which will, in their turn, produce again, and all will perfectly resemble their first parent bulb (though it has happened very seldom indeed that flowers have changed in colour, but this will be explained).

Growers call the flowers they obtain by raising from seed "Conquests." They share and exchange among themselves

these seeds of promise, and sell to each other the third quarter or half of the bulb productions, which, however, should not be parted with unless there are a certain number of young bulbs to be divided. The prices they pay for these invaluable seedlings would astonish an amateur. They enhance the value of the bulb, for which the fixed price is sometimes above 1000 florins. Some are worth as much again. Growers usually keep notes of the origin and date of bulbs.

Some hundred years ago double hyacinths were thought little of; they were almost unknown. Swertius, in 1620, gives a list of about forty kinds of hyacinths; none of them were double. The gardens of George Voorhelm belonged also to his grandfather, who had already tried raising hyacinths from seed, and whenever he made a Conquest, Pierre Voorhelm would reject any which seemed out of the ordinary, or out of proportion to the rest of his flowers, for in those days they took a pride in the formal and regular arrangements of their flower-beds. He took care, especially, to destroy double hyacinths when they appeared, without waiting to see what they might become if they were allowed to develop. He was only anxious to keep flowers which promised seed. It is certain that double flowers have not a seed-bearing quality; they are not formed for maturing the seed enclosed in the ovary, so that any flower without this particular good quality did not fail to be rejected. No one took the least pleasure in the idea of a double hyacinth; it was rather regarded as a monster (or freak of nature), just as at the present day nobody cares for a double tulip.

Pierre Voorhelm fell ill, and being quite unable to visit or attend to his plants until the hyacinth season was nearly over, he happened then to see a double hyacinth (the kind is now lost) which had been forgotten, and had not been thrown away as usual; it was very small, and he only liked it because it seemed to match very well with the single ones

—so he cultivated it with the rest and obtained bulbs from it. He found it was much admired by amateurs, who were ready to pay a good price for it. So he took to cultivating the double as well as the single, and soon began to be as anxious to find them among "Conquests" as before he was to get rid of them.

Of the double species the first known was named "Marie," this and the two kinds that followed are now lost. "Le Roi de la grande Bretagne" existed only seventy years—this was rare and much sought after, and the price rose to many thousand florins. This bulb, imported to hot climates, grew infinitely better than in Haarlem; for it soon died in cold or damp spots. From this time great attention began to be paid to the cultivation of hyacinths raised from seed.

The number of "Conquests" has now become immense, and many more grow bulbs than in former days, and every grower makes his own catalogue, in which his "Conquests" are known under names which are kept in all the lists which are re-written every year. In this list there may be flowers of different colour bearing the same name—such as "Gloria Mundi," which is classed with the blues; the same name re-occurs classed with reds and whites. Frequently double-flowering bulbs of different colour have the same name—so that it is as well, when ordering a particular bulb, to specify and enter into details when writing the order. Then mistakes will be prevented, which are as distasteful to the grower as to the dissatisfied purchaser. Growers do not all agree in classing their bulbs, some for example classing among reds a hyacinth which another would call *white with red heart*, and which a third might call pink and white, or flesh colour. Besides which the exact shade or *nuance* differs perhaps in every garden—and it is not so easy to class hyacinths in a way to satisfy everyone, any more than it is easy to produce a completely satisfactory Method of

Botany. Seasons are variable, and colours of flowers are much affected by changes of weather. 1767 was a very disastrous season by reason of the cold north wind which prevailed in the early part of the year. Red hyacinths were infinitely poorer than the preceding year, which was a particularly favourable one to bulb growers.

One must make allowances for seasons and accidents, and one ought not to expect the bulbs sent off annually by the growers to be always equally good, for in some years they are more successful than in others—also the same bulb which flowers splendidly, as a rule, may take it into its head to yield a very poor flower, though it may be planted in the same soil—between two others which are doing their best; one can see no cause why they should be so uncertain, except perhaps they pump in sap more vigorously at one time than another. It can be accounted for sometimes by the fact that the bulb itself is feeling disposed to throw out young bulbs, and the sap is being drawn away from the flower-stalk—or it may have suffered from a cold draught, when it was lying on the shelf in the winter —or it may be it is feeling the damp.

Chapter V.—Organs of Reproduction

The various species of hyacinths, though apparently different and distinct, are essentially alike. Bulbs of one sort differ very little from those of another—the leaves are always alike, their stalks grow in the same way—their blossoms, though infinitely varied, are arranged in the same regular order—each connected with the stem by a little thread, called the pedicel.[1] The double scarcely differs from

[1] The calyx or flower-cup, being coloured or petaloid in its nature, is now called the corolla, but the old-fashioned word is here used—the pedicel is the little stalk which attaches the flower to the stem (or peduncle).

A BOATLOAD OF FRAGRANCE

the single, except in the blossom. We have already followed the gradual course of the growth of the bulb, and described its general composition. We will now go back to the single hyacinth, for in explaining its work of reproduction it is easier and more convenient to dissect than the double flower.

The calyx or corolla forms at the base (through its shape) a chamber or room in which the "ovary" is found, but detached from it. At the point where the calyx is narrowed in at the entrance of the ovary chamber are the stamens. The parts of the corolla (or divided sections which curl back in the hyacinth) are called petals.

The stamens are attached to the interior of the calyx, and from the base of the stamen to the pedicel (or little connecting stalk) runs a fine fibre (which takes the place of the filament which is detached in other flowers), and this is seen from the outside as a line of colour a little darker than the rest of the flower.

The *ovary* (in the chamber at the bottom of the calyx) is surmounted by the pistil, the narrow body of the pistil is called the stylus, and the head is the stigma.

The stamens of the hyacinth have no filaments, they are sessile within the calyx, and the anthers are also attached at their base (though there is the fine thread of darker colour to be seen running through the calyx extending from the stamen to the pedicel).

The stamen is covered, when ripe, with a yellow dust called *pollen*, this looks like little black grains when under a microscope—they are little bags full of a kind of clear juice, these, when the stamens bend over and shed (as pollen), are caught by the stigma at the head of the pistil. This stigma, when seen under a microscope, is seen to be composed of very fine valvular cells, which can hold the seminal juice—the juice passes through the narrow channel of the stylus (or

body of the pistil) into the centre of the ovary, which has an aperture so arranged as to let it in till it is full, when it closes again so completely that the seminal juice is held within till the time comes when the ovary is forced open by the ripening seed.

Before the flowers expand, and while they are still enveloped like a wheat ear in leafy bandages, the ovary is already furnished with eggs; but the seminal juice has not yet been deposited, the pistil not being formed enough to open its cells, but even while the flower is still in bud, the anthers let fall their pollen, and the pistil opens its cells, and no one seems to know exactly when it happens that the pollen explodes its little capsules of liquor or vapour or breath, which form the seminal juice.

Saint-Simon has a theory that the bees flying to and fro constantly over the flowers disturb the pollen, often carrying with them some of the pollen (containing seminal juice) from one flower to another, where it is deposited and received through the pistil into the ovary, and he suggests that this is the cause why "Conquests" (*i.e.* hyacinths raised from seed) never bear any resemblance to the flower their seed is derived from. But this does not seem entirely to account for their infinite variety. The invariability of this rule (that no hyacinth has been known to produce its like by seed) seems to prove that variation is not subject entirely to accidents of this kind, for surely sometimes by accident there would come up the same flower as that from which the seed was taken. Some growers may have taken seed from hyacinths grown in hothouses, where the flower has been protected from bees and butterflies, and thus undisturbed the flower should have had seed which reproduced its own kind—and why should this occur as an invariable rule among hyacinths, when other flowers more frequently reproduce their own kind than not, with them the *varia-*

tion (when their seed has been crossed by insects) is an *accident.*[1]

Curious experiments have been made with hyacinths.

Two different bulbs are to be chosen, blue and white, for instance. Cut them perpendicularly down nearly through the middle, but being careful to avoid cutting into their central shoots (*i.e.* the future flower-stalk), then join together the two larger halves containing the flower-shoot, thus making one bulb of them, so that the two flowers should appear as arising from one bulb. Then, with a little moss wound round the closed joins, the made-up bulb may be put into the earth like any other. This usually results in producing two stems stuck together back to back, with one skin around them both apparently; and on one side comes out white flowers, on the other red or blue. Sometimes the colours get mixed, the colour of one flower shaded with that of the other, very rarely do the stems grow separate.

None of these experiments seem to explain how it is that a single hyacinth can produce a double (by seed raising), though perhaps in ten thousand seeds only two or three will come up double flowered; nor how it is that the double can be redoubled (through seed), and that once redoubled, the bulb is constant in giving off young bulbs with double flowers, which never again degenerate into single; nor will a single, in its offshoots, ever become a double hyacinth.

[1] One feels disinclined to believe Saint-Simon is quite accurate in his theory, that the variations in kind and colour of hyacinths raised by seed are entirely due to the interference of insects, for in the case of bees, it has been observed by certain men of science that bees invariably prefer to visit flowers, not only of one kind but of one colour during the course of one journey. That thus a bee, beginning on a certain white flower, will choose out these white flowers, leaving out every coloured one of that or of another species, until, laden with honey, it returns to the hive. (It may be, bees lose their heads when it is a question of hyacinths.)

Chapter VI.—General

In the cultivation of hyacinths it is impossible to keep to any fixed rule. Not only must every country and climate make its own, but every hyacinth has its own ways and customs, its own special qualities and characteristics. The most distinguished of their species exact a great deal of attention, care, and management.

"François Ist" finds great difficulty in producing offshoots, and great care has to be taken of the young bulb, but when once arrived at full growth it is not as subject to disease of various kinds as are other bulbs, and it does not die easily. It is the only bulb that still continued to command a high price twenty-five years after its first appearance; 100 florins were paid for a single bulb.

"Rien ne me Surpasse" is one of the most perfect blue, but it has such wretched, weak, faded, even crumpled leaves, one would think the poor thing was ill, but notwithstanding it produces a handsome, healthy-looking flower.

"Passe non plus ultra" also looks very deplorable as to its leaves, they seem hardly able to hold up, and remain lying flat upon the ground, though quite green and well.

On the other hand, "Og Roi de Basan" shoots up its leaves so straight and tall, and so large, that they seem quite out of proportion to others, and the flower is an extraordinary height, overtopping all the rest. The "Theatre-Italien" is a good red, but it grows very short, and comes out before its leaves, so that its head may be nipped by the frost.

"Marquise de Bonnac" is a very delicate colour, but it gives way in the stem before the flower is fully out. The stems seems to fade and dry up, and the flower falls on its face, and this is a very tiresome habit. But it does not seem to damage the bulb, which flowers regularly every year, notwithstanding these little accidents. A famous florist told

me it was because it had a bad circulation, and the sap hung on the sides of the bulb, instead of running up the stalk. "Alcibiades" and "Beau-regard" are also subject to such accidents; but they can be prevented by planting the bulbs in November, that is, a month later than other sorts. These kinds give off a number of young bulbs. The bulbs which multiply very little and slowly have generally better constitutions, and do not perish so easily. White, with red, purple, or violet hearts are very subject to decay. "Gloria Florum Suprema" perishes easily, and its offshoots perish with it, and this is peculiar to this hyacinth, for most of those that perish easily also multiply quickly. The kind that multiply fast are generally furnished with more roots than the others.

Growers are mostly agreed that bulbs succeed infinitely better if taken up from the ground every year (though it does seem contrary to nature). It often happens that a bulb, if left in the ground, does admirably the first and second years, and sometimes a third year it does well, but after this period it usually catches some disease which turns into an epidemic, killing all the bulbs in its neighbourhood; it is too late then to find a remedy, and if lifted it will only rot on the shelves, as it would have done in the earth. One knows insects are more numerous one year than another, and thus they too may cause epidemics.

Lifting the bulb is also a method of preserving the young bulb, which otherwise would perish and decay from damp if left all the year round—or, as they are sometimes a foot or more below ground, they effort they make to force their shoots through that depth of earth is too much for them.

It has been observed that when the sap does not circulate freely in the bulb it is drawn up into the stem, and this is sometimes occasioned by overheating the room or greenhouse,—then it grows tall and weakly, the flowers are thin

and deformed. The more the channels through which the sap runs into the stem are dilated by too much heat, the tighter they close again when the sap has finished its action, and the bulb becomes thinner than it should be, and it is exhausted for the next year's growth and appears very languishing. One can see very well how this comes to pass when it is remembered that the next year's flower is actually contained in the base of this year's stem, therefore what weakens one weakens the other. If the bulb is very deep in the earth and the ground is hard, it cannot spread and enlarge itself with comfort, so the health of the bulb requires it to be lifted every year. Besides the necessity of *separating* and preserving the young bulbs which have to be replanted, there is yet another advantage to be gained in lifting, for then there is an opportunity of taking away *decayed* bulbs before the disease is able to spread further through contact with others.

Having given some ideas on the cultivation of hyacinths in general, perhaps it is as well to give in some detail an account of the particular (or individual) care and attention bestowed upon their bulbs by the Haarlem growers, and perhaps some hyacinth lovers may feel drawn to imitate their spirit. Haply if they meet with the same difficulties they may benefit by their experience and observations, and thus obstacles may be surmounted that stand in the way of the development of the ideal flower. These obstacles are often the result of soil, climate, and inexperience.

As a general rule, hyacinths require a light soil, which easily lets the water run through, but at the same time such a soil is soon washed out, and it thus in a short time loses its good qualities and richness. The sulphurous and oily qualities in the soil, that the hyacinth delights abundantly to suck out of the earth, would be washed away or evaporate speedily in such soil, even if the bulb itself did not actually

exhaust the spot where it has grown, this is the chief reason why growers change their bulbs year by year. Damp is death to bulbs. In a damp soil bulbs can never be preserved for any length of time. The two general rules,—*Choice of light soil*, *Avoidance of damp*, are the very foundations of bulb culture. The "couches" or "beds" made by florists for their finest hyacinths are *remade* every year, they are also protected by caisses and layers of manure from the cold in winter, and they are shaded from the hot sun in spring by canvas awnings. The old soil (taken from the hyacinth beds) is carried to the garden borders, where other flowers are grown, such as tulips, lilies, Fritillaries, etc. The following year hyacinths are replaced in these borders, and succeed therein marvellously,—thus year by year the same earth bears alternately hyacinths and other flowers. If the reader's patience is not exhausted entirely I must ask him to bear out a little longer, for I cannot without entering into very minute details give any intelligible idea of the qualities necessary to provide the sap with the kind of nourishment it seeks in the soil after the bulb is put into the ground.

In Haarlem they take two years to prepare the compost, or composed soil, which suits hyacinths so well. The first year a store of leaves are gathered together and laid in considerable heaps, so large that while they are rotting and becoming fit for use the sun cannot penetrate, for if they were spread about the sun would cause the salts and oils contained in the decayed leaves to evaporate, for this reason the heaps are not to be in places where they are exposed to the sun, nor in a damp place where water can sink in or stagnate. Growers do not gather in all kinds of leaves, they have observed that oak, chestnut, beech, and the leaves of the plane tree (which is now becoming common in Holland), and others of like nature, do not dissolve easily into earth; while the leaves of elm, wych-elm and birch, etc.,

are chosen because their loose and fibrous tissue dissolve more readily into soil.

In the same manner they lay up a heap of cow-manure, which is left to ferment *en masse*. Every country has its customs, and the Dutch customs make a real difference in the quality of the materials employed. All over Holland cows are kept in stalls from November to May only, and during this time they do not eat grass. All the summer they remain in the open, night and day, in the fields, so that manure is not kept or taken up in the summer months. In the winter, when the cows are fed on nothing but dry food, the manure is of quite another quality from the summer manure, when cows have grass. This may be useful to note for those who live in countries where manure is kept all the year round. Cows are tethered in stalls in so narrow a compass that one can hardly conceive how they can exist like this. They stand on a kind of platform between two trenches, before and behind them; in the front trench their food is put, which they can only get at by pushing their heads between boards, which also prevent them from reaching too far and pulling out the food, where it would be trampled under their feet. The second trench, which is deeper, is behind them to receive the manure, which is taken away and heaped up in a dry place, where it can easily drain and where the rain can also run off, for no water or wet is allowed to settle in or near the heap. As no straw whatever enters into the composition of this manure, it is not at all like the kind collected in other countries. I do not know if this is the reason, or why it is that in England, especially round London, hyacinth growers avoid using cow-manure as much as possible, the soil there being so stiff and rich that it suits them better to make it a little poorer, with an admixture of sand, than to heat it even with cow-manure, which is the lightest kind of manure there is. First

a heap of leaf-manure, a second heap of cow-manure, and a third heap of sand is now made of sand brought from the dunes, or it can be dug out of the very ground beneath to the depth of some feet. Though all the soil about Haarlem and its neighbourhood is mainly sand, especially near the dunes, where most of the bulb fields are, yet they prefer to fetch sand from a distance rather than take any from the surface of their own ground. This sand should be as carefully examined as is the manure, so that, now that I think of it, I must enter into further details, which will be thought unnecessary by some people, but others will be glad to follow the spirit of our inquiry.

The nature of the soil in Holland proves that the country has undergone great geological changes, apart from the continual encroachments of the sea.

It seems that at a very distant period, perhaps before or after the Deluge, the country must have been covered over with forests, as were Germany and Gaul in later times.

Either in the great Deluge of Sacred Writ, or during one of the partial deluges that men of science speak of (but of which no one seems to have any positive knowledge), these trees must have been thrown down and laid on the ground in the direction of east to west, in such a manner that where they fell they form strata (or layers), which time has reduced to a thickness of six or eight inches at the most.

It may be that this layer of trees was at first exposed to the air, or (as is more likely) was for some time covered by the sea, which, depositing sand, pressed and consolidated it into the mass which we now see, and which is found in all parts of Holland and Zealand, and is known under the name of Darry or Derry.

It is very easy to perceive that it is old wood decayed into the earth and reduced to the loose consistency of a sort

of brown charred coal. In some parts bits of the wood have been preserved whole and unchanged.

In the Bailey of Amstelveen, near Amsterdam, bits of wood are often disinterred which has still "heart" enough to be used as ordinary wood. Between Alphen and Leyden are to be found in several places whole tree trunks, ten or twelve feet long. The derry matter is very substantial, and it is very inflammable; it also holds water, so that it does not run through from the surface of the peat to the water in the soil below it. In Zealand, where it is easily taken up, it is forbidden under penalty of death [1] to carry away the peat, because the water underneath, which it retains, would do considerable damage in the island.

As we now know that piles and blocks of wood can last 2000 years in the earth without rotting, so we may conclude that these trees (which now compose the derry or turf) must have been much longer undergoing the various operations of nature which resulted in producing this change. No tree roots can penetrate this derry, and wherever sand does not cover it over a certain depth, no vegetation can grow. Water falling on the peat is held there, having no means of escape, and the sand on the top is, therefore, always moist and fresh in proportion as it is near the derry. If one digs a little hole in this ground, the water which "fattens" the sand collects in a moment and fills up the hole which has been made, and this becomes a running spring. These sort of springs exist all over Holland, and they generally go by the name of sand-wells. They are kept supplied only by rain, or by the water which filters down through the sand from the dunes, and this often to a great distance.

If bulb roots were to reach down to within a foot of this layer of peat they would be spoilt, and the bulbs would perish. The depth of the sand-layer over the peat is

[1] Two hundred years ago.

unequal and different in parts. By measuring it they test the value of the ground, and not less is the value measured by the length of time the sea has withdrawn from the surface. There is no doubt this sand is from the sea-bottom, whether it was the sea's action that brought it, or whether it has been blown and driven by the wind. The dunes have so often shifted that a knowledge of the variations due to the shifting of the sand in the dunes is enough to account for sand-layers, for it can be driven very far indeed by wind from the sea.

A little while ago the village of Sheveling, near the Hague, was surrounded by the dunes, which were at that time some distance from the church, now it is much nearer,—the church cannot have moved. On the same coast the mouth of the Rhine has been choked with sand, and the sea now covers the castle of Bret, facing Catwick-sur-Mer. The castle can still be seen at certain seasons at low tide. The sea has remade other dunes, half a league farther inland. All along the coast near Haarlem, beyond the canal which connects Haarlem with Leyden, the main road cuts through these dunes in several places. In the island of Walcheren, in Zealand, at very low tide can be seen vestiges of the ancient town of Domburg, where they fish up statues of Nehellenia, a heathen goddess, and also early Roman inscriptions.

In the present day dunes 100 feet high separate the new Domburg from the one invaded by the sea, and the Zealanders, through their marvellous and inventive industry, have succeeded not only in fortifying themselves against encroachments from the sea, but have made very extraordinary dykes, like the one at West Cappel, which you cannot see when you are standing upon it, as it is nothing but a very long sloping bank or glacis of timber-work, but the slope is so gradual that the only resistance

the water meets with is the long journey it has to go to reach to the summit of the dyke, which, at its level, is much higher than the sea.[1] But besides this they covered miles of the sea-shore with platted straw matting, which they plat on the shore itself,—this is to prevent the sea from carrying the sand away from its own shores. These mats have to be renewed almost yearly.

The sands of Haarlem are all more or less of this nature, and contain saline and sulphurous particles of matter; the under stratum of peat or derry prevent these from being absorbed into the ground. The sand also contains particles which collect in some places and form a very thin stratum of hard black matter, like that with which some minerals are coated, and this is not less injurious to vegetation than is the derry.

The great success the Dutch growers have had in cultivating bulbs which cannot be successfully propagated elsewhere is very much due to the presence of this sand, deposited by the sea on a matter which, fortunately, water cannot penetrate.

To return to the three heaps,—sand, cow-manure, and leaf-mould,—the sand is placed in large heaps to "ripen," rather perhaps to lose some of the moisture. The growers from the three compose one general mass, which they arrange in the following order: *First*, they make a layer of sand; *second*, of manure; and *third*, of leaf-mould eight or ten inches deep; they then begin again making more layers in the same order, until their mass is six to seven feet high. The last layer is manure, but as this is apt to harden in the sun, they throw a little sand on the top. When this compound has fermented, six months, sometimes rather longer, it is mixed up and another heap is made, which is, however, again unmade and thoroughly remixed. When this soil has

[1] Two hundred years ago.

remained a few weeks to settle, it is carried to the beds, where it is laid to the depth of something like three feet.

George Voorhelm, in his book upon hyacinth culture, says that this manure should be composed of *three-sixths* of cow-manure, *two-thirds* of sand, and *one-sixth* of leaf-mould or of tan, and he for his part preferred fresh manure to that which had been kept a year (to ferment ?). He especially warns amateurs against using horse, mule, pig, or sheep manures ; also he cautions them against using mud or cold earth drawn from wells, or basins where the standing water and mud have to be occasionally cleaned out ; also against any powdered stuff or manures picked up with dust from the street. He quotes persons who compose their soil of tan (which has already been in use and nearly lost its heat) with cow-manure and leaf-mould, using no sand at all.

When the soil is brought to the flower-beds they put the said quantity beneath the bulbs, making the earth quite flat and even, without pressure, and placing the bulbs upon the earth, *not embedding them.* Then they are looked over to see that the bulbs are arranged in the proper order or according to diagrams marked out for them. When their places have been fixed, more soil is brought to put over them, great care being taken to let the earth fall lightly on the bulbs, not to disturb their position. The last addition of earth is generally not more than three to four inches deep. In cases where the bulb has to be brought forward in its growth, or else kept back—and is therefore put at a greater or lesser depth in the earth—the gardener, in the latter case, places more soil under the bulb to raise it higher, and this is a much better method of putting in bulbs than making a hole with a dibble, or, as some do, thrusting the bulb itself into the earth with no tool and raking some earth over it, for this plan, besides hardening the earth all round the bulb (the hole forming a sort of gutter which

holds water!) also runs a risk of bursting the bulb, which may be already showing roots, or young bulbs hidden within might be knocked off without its being perceived. The same method is used in planting bulbs in garden borders. The surface of the earth is taken off and laid on one side, the bulbs are placed in rows, and are very carefully re-covered with the soil which was laid upon the side.

The frames used over show flower-beds should be raised not more than a foot above the earth, and not less than half a foot. If too high, the air dries the roots; if too low, the damp (from the vapour) may reach them. The back of the frame should be buried rather deep, so that when it is necessary to cover the flowers with planks, the frame will be able to support them, or planks must be put at the back and sides, fitting into each other, upon which those which form the roof over the flowers can rest. The frames should be slanting from the back downwards to the front, to let the rain run off and prevent it from dripping into the bed. If the cold is very intense, the planks may be covered with manure to prevent the frost from penetrating beneath. If the season is a fair one, the flowers may be given a little air; but in cold seasons it is a risky thing to do, because the early bedding plants are exceedingly tender, and the heat of the manure, or whatever is provided to shelter them from cold air, causes a damp vapour to rise inside the frames, and as this cannot evaporate it falls back upon the flowers, covering them with a little dew, which, if the cold air were admitted, would freeze directly. It only takes an instant for young buds to freeze, then the flowers come out, looking dried up, with burnt tips. When the cold weather is past the manure is taken off, and air is admitted to the beds for a few hours in the daytime, care being taken to cover up again at nightfall. The manure which serves to protect the bulbs from frost also brings forward young shoots, so that

they begin to show earlier in hot-beds than in garden borders. The slowest and latest sorts begin the earliest to sprout. They are therefore purposely not planted so deep in the ground, that they may get more quickly warmed by sun and air, so it is quite natural that their buds should pierce through earlier—but the difficulty the sap has in penetrating and circulating through the very compact structure of these bulbs makes it very difficult to get them to flower in good time with other sorts. Growers have to use their skill not only in guarding flowers which are beginning to show from frost, but also from strong winds, damp, and everything that can do them injury. One year rats carried away and stored by hundreds in their holes the bulbs in the gardens of Van Zomped at Overween,—although they had a stream to cross to get at them. Growers must be *au fait* with every possible eventuality, and must foresee and prevent every possible mischief. They must know exactly the time by night or day when it is proper to cover or uncover their flower-beds. Their chosen blooms are covered with tents of canvas, beneath which they can conveniently walk.

Besides these tents, over the most delicately-complexioned flowers little parasols are arranged. These are mounted on little rods, which stick in the ground, and quite protect the flowers, which last several days longer with growers who give them this protection, and keep their colour better. When the flowers first begin to expand, our florists (who work on the principle of never watering) protect them from rain as carefully as they do auriculas. When they begin to make a show of blossoms they powder the sand-beds with a light mould, in order to make the colours look more brilliant against the dark brown background. They tie the stalks to little wire rods, painted green, leaving the ties loose, so that none of the blossoms are caught and broken when the flower

pushes up in its growth. The pedicel is very delicate before the blossom is formed, so that the slightest thing can easily break it. When the single hyacinths are in bloom the florists open their gardens to the public. A wonderful sight presents itself on first entering the gardens, vistas of alleys with flowers of every variety, and kind, and colour, cut by borders and beds which contain each one kind of flower only. Hyacinths are in the greatest number. Early tulips, narcissi, anemones, and others are laid out in successive order. The effect is surprising. Never, when they are once selected and placed in position, does a grower ever touch his bulbs again, he dare not disturb them once they are planted, but if a bulb dies or refuses to grow they may possibly embed a flower in a pot in its place; it is even permitted to put a flower like it in a glass vase close to the leaves of the lost blossom, but they never attempt to take out a weak or unsuccessful bulb in order to substitute another. The flowers should be arranged according to gradation, that is, the tall specimens behind; the short in front; the colours as varied and as brilliant as possible.

The beds have a much more brilliant effect if two flowers of the same colour are put together, in pairs; some plant each kind thus, double, throughout the bed. The chief thing in arranging flower-beds is to manage that all the flowers should be out in full flower at the same time. It is a very difficult art, but the Haarlem bulb growers are able to accomplish it. Every bulb has its own particular habit of growth, one will flower early and another late, there may be the difference of a whole month between them.

People come miles to see these gardens, which are in bloom all April and part of May. Single hyacinths begin flowering towards the end of March, and last in flower for about twenty days, if the season be favourable. Single hyacinth beds are usually placed alternately with double,

A DUTCH GARDEN IN SPRING

and the effect is more brilliant. Single hyacinths grow more thickly, there are sometimes fifty blossoms on one stalk, and very often several stalks on each plant. The red-single are a more brilliant red than are the red-double, and single blues have much the most delicate shade of colour.

About the 20th of April the hyacinths begin to be at their best, the 25th and 26th are ordinarily the days when they are in perfection and in their full glory. By the 4th or 5th of May they are going over, and the later sorts are beginning.

In Haarlem they are too carefully attended to to suffer much from the weather, their cultivators being very industrious, and watch over them, arranging for the protection even of the most ordinary kinds, for none are neglected.

When a new piece of land is taken for cultivation, they begin by trenching it six feet deep, and if they come across a bed or layer of derry, they do not fail to take it away. In gardens which have been a long time under cultivation peat or derry is not found, for it is injurious to vegetation. Pure sand is usually found to some depth, but they try to dig down below the sand to the earth and dig up about a foot of it to mix with the soil. The sand corrects the effect of the cow-manure which is put in, a layer of seven or eight inches deep (without straw), over the entire surface of the ground, which is then worked in with a spade. They mix up the manure as much as possible, so that when well worked in it is to be found to a depth of one foot below the surface.

It is not a good thing to plant hyacinths the first year in the newly manured soil; they usually leave an interval of one year before they put in hyacinths again, and in the intermediate years they cultivate tulips, jonquils, narcissi, lilies, crocuses, fritillaries, crown imperials, martagon or mountain lilies, irises, and other tuberous plants or bulbs

which they keep in quantities; they take care to work the ground well every year, this brings the earth which was below, at the roots of the last year's plants, to the surface.

The earth dug, trenched, and enriched (for it must be borne in mind it is nearly entirely sand) remains for five or six years without need of manure. After this space of time it has to be worked all over again, dug as deeply as before and manured, if possible adding more pure sand, which is found by digging a very deep way down. In winter the beds are covered with tan or manure in proportion to the strength of the cold. Growers like the frost to penetrate as far as within an inch of the bulbs. If it goes farther, it freezes the cluster of buds; and if it reaches the roots, the bulb is lost beyond redemption. But such a misfortune seldom occurs, for growers know how to protect them by increasing the thickness of manure or tan covering. Some heap up the fallen snow over the beds, believing it is good for bulbs, as it is for nearly all other plants, especially for corn and oats; while others take away the snow rather than add to it. Each has good reasons, and much depends on the time of year, for if it is late snow and the hyacinths are beginning to put out leaves, a quantity of snow may be hurtful and cause a fermentation of the sap, which may cause the bulb to decay.

After the cold weather is over the hyacinth buds begin to pierce through the manure, and then it can be taken off, and there is nothing more to be done after that but just to pull up any weeds that make their appearance. Growers either leave the flowers to fade or else cut them off, they believe it makes no difference which they do. Some, when the stalks are left uncut, strip off the blossoms with their ripening seed-vessels, thinking it preserves the sap within the bulb; others cut the leaves half-way down, for they grow very long and lengthy when the flower is dead. Both these methods

are clean contrary to the principles of the art of cultivation. Still, stripping the blossoms does little harm in comparison with the harm done by cutting the leaves, which have a most important function to perform, for they now take on themselves the work of the dried-up roots and feed the bulb, and they breathe in through their leaves the particles of air most suited for the plant's nourishment. The leaves are then entirely maintaining the plant and keeping the sap in circulation. When the fans or long leaves begin to fade and dry, the bulb is then pulled up out of the earth—with the hand, as much as possible, for fear the spade or fork should injure the young offshoots. The leaves are then cut off altogether, and the bulb is replaced in the earth *on its side*, being covered up again with an inch or two of very light soil, such as we described—the bulbs are left about a month or two in this state. When the time comes for them to be finally taken up, a fine dry day is chosen. The bulbs are then left out in the open air for a few hours. (If the sun is too hot, it will make them "boil," as the gardeners say, and the sun can kill them as surely as the frost.) They are then placed on sieves, where they are lightly shaken to separate from them the earth which sticks to them, the roots are carefully removed—*carefully*, for the sake of the young bulbs (or offshoots)—and put away on the bulb-house shelves.

All growers proceed very much in the same way, but those who do not follow merely mechanically the trade methods, know that every bulb likes a separate treatment, and they do not take up all the bulbs in one bed on the same day—they leave the lazy ones, which are slow to ripen, longer in the ground, and they don't cut the leaves of the quickly growing ones quite so soon. When taking up their bulbs, they judge the quantity of sand to be left to cover them (in the drying process), according to the need of each one. Experience having taught that a slow bulb which

takes long to develop gains warmth (and the fermentation of the sap is hastened) by letting it "cook," as they say, in the sun. On the contrary, if it is a quickly ripening variety, they keep it much less time in the oven (that is, under sand in the sun). These have a little more sand over them, and are stored a little sooner in the bulb house. One grower said he had for fourteen years planted a François Ist and taken it out every year exactly in the same state as he had put it in, it had not changed in form or size, nor had it given a single offshoot. Another said he kept a Duc de Bourgogne thirty years in the same way. G. Voorhelm said he had known a bulb look the same for fifty years, but he did not mention whether it had ever given offshoots or not.

In the end of June, or about that time, bulbs are put away into bulb houses. The houses should be perfectly dry, inside and out, for damp is very injurious—the houses should be thoroughly well ventilated, the wind allowed to blow through. It is better if the bulb house be made to open on three sides. When the bulbs have been sometime stored on the shelves, they are cleaned; they then go through a medical examination, and if there are any weak or sickly, they are separated from the others. The evil, if it exists, can be detected by cutting the bulb at the place where the fans or leaves come off. If the circle of tunics looks quite healthy, with no stains or spots upon them, there is no fear of disease—there is none if there is no outward mark of decay anywhere to be seen;[1] but if there is the smallest spot or mark, the knife must cut down to the root of the evil. Amputation does not kill the bulb, and it is the surest remedy. As some of these diseases are contagious, they can be communicated to others even in the ground, where they are not so closely packed as they are upon the shelves,

[1] Except new disease.

therefore it is necessary to take care to examine them thoroughly in order to prevent contagion. The nature of these diseases and their cause is not yet known. The best remedy is amputation of the diseased parts, and many growers remove everything that has the least appearance of decay. The great art (and experience alone can teach this) is to know how to dry the cut wound without exhausting the sap in the bulb, and to know just the time to put it back in earth,—the earlier it is done and the more carefully the operation is performed the more likely the bulb will be saved. The most common disease is an outlet of sap between the tunics. Another is produced by small green-flies, which are probably deposited as eggs. Green-fly and centipedes are the most commonly to be seen. Bulbs left for a long time in the same place are sure to contract diseases—this is one of the chief reasons why growers are for ever changing them (even the common sorts), and are always renewing the soil or putting the flowers in different places alternately with others. When the growers are ready to replant their bulbs, they clean them again, taking away the outer red skin or tunics, which are now dried up, and keeping those adhering to the bulb, for it would be harmful to a degree to take them away. They put aside the young bulbs which are strong enough to be separated from the parent bulb. The method of planting again has been described. I must add that show-beds should be chosen in sunny spots. Hyacinths cannot bear to be in the shade, and they must not be put under trees; but as they also suffer from wind, it is a good thing to have trees not far off to break the wind.

In conclusion, it would be a good thing if amateurs were not quite so prodigal with their bulbs. They grow them in pots or in glass during the winter, and it is usually their custom, when the flowers are dead,

to throw the bulbs away, supposing them to be good for nothing when they have blossomed once. Instead of that, they should be left in the glass jar or flower-pot till the leaves are likewise dead, then they can be put for half a day in moderately hot sun to dry, and afterwards placed in earth on their sides, as is done with other bulbs, covering them lightly with sandy earth, and taking them up in the same way; when in the autumn they are planted there will be no difference between them and the other bulbs. If they are round and full of sap when they are taken up, they can be used again in glass or pots in the house a second year, if not, it is better to leave them in the open ground. But as it is sometimes frosty weather when the bulbs are taken from the jars, it is better to put them away at once in the green-house, covered with a little sand, and wait till fine weather comes to put them outside for a month or five weeks in the earth, preparatory to taking them to the bulb-house shelves—*to plant before the rest.*

Hyacinths can be also grown in pots filled with moss, well pressed down and kept sufficiently moist. If grown in water, rain-water is best.

Bulbs increase so rapidly that a grower who takes a little trouble to cultivate, let us say about 300, will find himself in a few years possessor of several thousand, which he does not care to keep. He will also have the satisfaction of making Conquests with seeds he has himself sown, and by exchanging these seedlings he can procure for himself rare and costly kinds, which he cannot buy; he is thus able to amuse himself with a collection which affords him much pleasure, and he is also able to bestow some upon his friends. He may never have been in the neighbourhood of Haarlem, he may never have learnt so many details as are here put forth, in the hope that they may prove useful to many a lover of flowers.

George Voorhelm, in the preface to his treatise on hyacinth culture, encourages men of other nations to cultivate the hyacinth, and to sow seeds, and, in his opinion, it would be better that the Dutch should meet with rivals of other nationalities, for if all produced good flowers, they would be able to supply each other reciprocally. He thinks it a pity no other nation should have attempted to second the Dutch in a work which reveals so wonderfully the many mysteries of nature as that of the culture of the hyacinth.

Maximilien Henri, Marquis de Saint-Simon, wrote *Des Jacinthes, de leur anatomie, reproduction, et culture*; also *Histoire de la guerre des Alpes, ou Campagne de 1744*; *Histoire de la guerre des Bataves et des Romains.*

Saint-Simon, born 1720; died 1799 at Utrecht. This Marquis de Saint-Simon was uncle to Claude Henri, Comte de Saint-Simon, founder of the sect called Saint-Simoniennes. I think the Marquis was nephew of the Duc de Saint-Simon, author of the *Mémoires of Louis XIV.*

II

THE TULIP TRADE

From De Koning's *History of Haarlem* (1635) ·

MANY, no doubt, have heard of the extraordinary mania for tulips in Holland in the seventeenth century. Dutchmen of all classes, highest to lowest, forsook their ordinary occupations and business, in order to engage in the tulip trade.

It is said the mania began first in France in the year 1635, and thence spread to the Netherlands. Enormous prices were paid, and even houses and land given in exchange for one bulb.

In Haarlem there stands a house, at one time in possession of the Widow de Lange and Van Ek—it is numbered W. 3, No. 575. It used to be two separate buildings, and one of them was known as the Tulip House, because it was sold for one single tulip. When the last alterations were made to this house in 1858 there was still to be seen a stone set in the gable, upon which was carved a tulip, and below the following inscription :—

1637.

This stone was kept as a remembrance of the famous tulip trade of the year 1637, "when one fool hatched from another, the people were rich without substance, and wise without knowledge."

Since that famous year, according to tradition, the road that led to the country beyond the Groot Poort and to the surrounding neighbourhood, where most of the best Haarlemers grew tulips, was called, in remembrance of all the money lost, "The moneyless path." The rage for tulips became intense, and every one was caught by the craze, and positively some were driven mad by it. Though a few made a great deal of money, the majority of the new bulb growers and buyers lost everything they possessed! There is a saying in Dutch, "It is not good to come to black seed, for then comes poverty." (Canaries are fond of eating their white seed first, and then have nothing left but the black.)

Whoever had a plot of ground planted tulips therein. Rich and poor alike—house-painters, cobblers, tailors, weavers; in a word, nearly everyone either grew or speculated in tulips—some sold all their tools and instruments to buy bulbs. And indeed they might well look forward to great profits, seeing that the bulbs, which in the beginning cost but a few guldens, had now risen to hundreds and thousands. The most coveted and rare kinds it had now become impossible to buy. For one single bulb 12 acres of land in the Schermer were offered. The *Semper Augustus* must have been the rarest and most costly of any, the fabulous price of 13,000 florins was once paid for it, and soon after three of these bulbs were again sold for 30,000 florins.

The price of land and the hiring of fields to raise the bulbs in grew very high. A gentleman was offered 50,000 florins a year for his field for seven years, in addition to a share in the profits. Such was the rage for buying and selling, that most of the inns and taverns in the town were turned into places of Exchange and Mart, where bulbs were bought and sold even before they could be taken out of the ground. A book-keeper was employed, who kept a book of

all the transactions and of the profits made, which seemed in some cases very large.

Many men, unused to the possession of so much money, became so very extravagant that they spent more than their income, and began to live at such a high rate of expenditure, buying carriages and horses, and living in such a fashion that only men who possessed untold wealth and capital could afford to do it.

What was foreseen by more wise and more thoughtful people came to pass. Everyone having now become bulb-grower, there came to be so many tulips in the market that prices suddenly dropped, and many buyers refused to take the bulbs at the price agreed upon, and many quarrels and disputes arose over the matter. Finally, the States-General of Holland appointed by decree that, from the 27th of April 1636, tulip-sellers had the right to force buyers to buy at a price agreed upon (a standard price?). So this decree stopped very high speculations, and a *Semper Augustus*, for example, for which previously several thousand florins had been paid, now fetched only 50 florins. There came a re-action, and a great number of people were ruined.

In this way, says De Koning, began and ended a trade or commerce in bulbs, which in nearly all the towns in Holland, but especially in Haarlem, Leyden, Amsterdam, Alknaar, Hoorn, and Enkhuizen, was kept up with such energy that, alone in Haarlem, 10,000,000 florins for tulip bulbs was paid and received, and the States-General of Holland were even weighing the advisability of taxing the industry which brought so much luxury. The little gardens near and in and about Haarlem had both wide and narrow "moneyless paths," all of which date from the time of the tulip mania in the seventeenth century, and remain as witnesses of the folly of our forefathers.

III

THE HYACINTH TRADE

From De Koning's *Tafereel der Stad Haarlem* (1808)

De Koning gives us an account of the hyacinth trade which began in 1730, and which continues to the present day. It was not so astonishing as the tulip trade, and though the price of the hyacinth did not rise as high as that of tulips, yet fancy prices were paid for some:—

Passe non plus ultra fetched	.	.	1850 florins
Gloria Mundi eenjong	„	.	650 „
Tempel Salomons	„	.	450 „
Praal Sieraad	„	.	400 „

From these figures one can see that the price of a favourite hyacinth could not be compared to the price paid for a tulip bulb, but to this day hyacinth culture is a trade by which people can really live profitably (this was 1808). Not only at Amsterdam, where there are many fields of hyacinths, but in many other Dutch towns, whence the bulbs are sent to all countries. In Haarlem many of the bulb growers living outside the Groot and Kleine Hout Poort had to send away such quantities to foreign countries that the spaces near their houses became too small to plant them out, so they were forced to rent more ground to make new flower-fields,

as their trade was increasing so rapidly. These flower-fields, so neatly and cleanly kept, made very beautiful surroundings to our town. When the hyacinths are in full flower they are, with their different colours, row upon row, a very beautiful sight, and many people are thus attracted to visit our country. For bulb growers themselves it is a pleasant time; they all meet and talk over the new sorts, and discuss their culture with no small degree of excitement; they collect under the shelters erected over the best sorts, and there stand smoking their pipes and relating to each other their various experiences and the experiments they have tried. Prices are no longer so high as in 1730. We have known, even in our own day, the "Ophir," now become so common that it has scarce any value at all, sold for 3600 guldens, which shows what people are willing to pay for a rare flower.

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